THE BUILDER

A JOURNAL FOR THE ARCHITECT AND CONSTRUCTOR.

WITH WHICH IS INCORPORATED "THE BRITISH ARCHITECT."

VOL. CXXX.—No. 4336. MARCH 12, 1926.

RE-PLANNING LONDON

THE Royal Institute of British Architects, the Town-Planning Institute, the London Society, the National Housing and Town-Planning Council, the Garden Cities and Town-Planning Association and other bodies interested in the development of London, recently approached the Prime Minister on the subject, and it is expected that before long the Minister of Health will receive a representative deputation. It may, therefore, be opportune to survey shortly the complex problem that this deputation will present, and to suggest certain considerations that must be borne in mind. It is partly a transport problem, but it is also a bridge problem, for London's bridges cannot be considered as an isolated question. Then, again, the future of London University and the possible construction of new Central Markets, in place of Covent Garden and Smithfield, will have their bearing on the new plan. The need, too, to provide more playing fields is at last recognised as essential to the health and *morale* of our town-bred population. The development of the river frontage from Blackfriars Bridge to the Nore, the growth of the docks, the new industries on the Thames side between Barking and Tilbury, the housing need d for the quarter-of-a-million population likely to find employment in that area, the provision of hospitals, and of adequate road and rail access to the river are all aspects of the same general problem. There are innumerable other projects that might be referred to, but the vital question is that we should decide as soon as possible on the machinery that is needed in order to ensure the preparation of a wise and co-ordinated plan. We are spending millions, for example, on roads, but how much of that money may be wasted for lack of this carefully thought out plan? More than two years ago the London County Council appointed a Town-Planning (Special) Committee, which has in preparation a preliminary plan, and useful maps have been made, but it is impossible for the L.C.C. to make much progress, apart from paper schemes, until the Government carry through their promised legislation to apply town-planning powers, now limited under the Consolidating Act of 1925 to undeveloped land, to districts already built over. There are, indeed, certain powers available under the London Building Act and the Public Health Act, and the L.C.C. is trying to deal with such urgent questions of public interest as the probable reconstruction of the estate of the Foundling Hospital in Bloomsbury. Even if they had further powers it is very doubtful whether they could use them to the full advantage of the community without the whole-hearted co-operation of other local authorities in Greater London and the Home Counties.

Consequently, some of those who have given evidence during the past few years to Commissions on London's government and traffic problems have urged the formation of a Greater London Committee, to be armed with executive powers. It is only necessary to study the reports of these Commissions and the conclusions aimed at, divided as the members were, to realise the inherent difficulties of this proposal. Similar difficulties, although in milder form, are raised against the suggestion of a large Regional Committee with advisory powers. It is true that in Lancashire, the Tyneside, Bristol, Yorkshire, and other parts of the country Joint Regional Town-Planning Committees are at work, but last week's report from Manchester shows that the original committee was somewhat unwieldy, and decentralisation in a measure has been adopted. Another proposal is to leave existing separate committees to study their own sections, establish new committees for areas where gaps now exist, and then possibly to form a strong central committee, in time, to bring together the threads and separate schemes. There are at present in existence a number of Joint Advisory Committees whose surveys concern Greater London. The West Middlesex Joint Committee has adopted a final report; the Thames Valley Joint Committee, that, unfortunately, is still not representative of all local authorities in the area, has published a report; the Committees for North East Surrey and West Kent have done useful work in co-ordinating the schemes of their constituent councils and preparing a regional plan of road proposals; North West Kent is at work on the Region extending from the west to Gravesend and Sevenoaks; the South Essex Joint Committee is composed of certain authorities who have wisely permitted their surveyors to prepare plans for developments foreshadowed between London and Southend; and, finally, there is the Joint Town-Planning Committee for the County of Hertford.

This activity, which is far more far-reaching than is generally realised, owes much to the knowledge and inspiration of Mr. Neville Chamberlain. The report of the Departmental Committee on Unhealthy Areas over which he presided in 1919 and 1920 is of the utmost value to every student of the subject, while his address last year to representatives of Hertfordshire laid down some of the main principles that must govern the movement for the planning of London. The Minister of Health then emphasised that town-planning proposals, if carried out, will save unnecessary expenditure in the future. He pointed out that all the big city authorities were compelled from time to time to spend very large sums of money in undoing the mistakes that had been made by those who went before them. "A well-thought-out scheme, embarked on while yet there was time, would save a great deal of money in the long run." Mr. Chamberlain then suggested that Herts. authorities should prepare a joint regional town-planning scheme to cover the whole area of the county, not "by the dictation or the domination of any one authority," but working in co-operation for a common object. Possibly he was thinking of London when he said finally that it was possible to make a town-planning scheme for more than one county, and urged Hertfordshire to initiate a movement which might have far-reaching influence "as an example to every other county." It is probable that any future development for London will follow the principles thus laid down by the Minister of Health, and he will no doubt expand these ideas still further should he receive the proposed deputation.

It is, however, important to recognise that neither the State, nor county councils or any other form of council, nor professional bodies like the R.I.B.A., can hope to carry through a plan for London without the full support of a better educated public opinion. So long as town planning is generally regarded as a rather cranky hobby indulged in by some enthusiasts who speak a curious jargon, so long will progress be difficult. When will London's chief business men realise that wise forethought is vital for industry as well as for the health and happiness of urban populations?

But there must be research conducted by those competent to survey the subject, and then the adoption of a policy. This costs money. In the United States the generosity of the Russell Sage Foundation and other bodies and donations made by "captains of industry" provided the funds that led to a wave of planning between 1911 and 1914 in New York and other American cities. It is, therefore, appropriate, in conclusion, to quote the report of the Committee of the City Plan of New York: "The City will probably spend hundreds of millions of dollars on public improvements during the next thirty years. In addition, during the same period, property owners will spend some billions of dollars in the improvement of their holdings. To lay down a general line of city development so that these expenditures when made will in the greatest possible measure contribute to the solid and permanent upbuilding of a great and even greater city furnishes the opportunity and the inspiration for city planning." This is as true for London in 1926 as it was for New York in 1914.

NOTES

The Future of Manchester.

It says much for the enterprise and wisdom of the Manchester citizens who have laid down a scheme for the development of so great an area round that city. If the scheme as planned is to be made a secure and safe basis for future action it would appear that all the necessities of proper town planning are provided for, and Manchester may look forward to a gradual but sure improvement in housing, open spaces, well planned roads, and proper segregation of residential industrial groups. Manchester, in fact, appears to have realised in a large and generous way more than any other city has yet adventured in a wise foresight of future needs. The accounts published of what a body of some three hundred citizens has accomplished in laying down a scheme of much discernment and far-reaching possibilities cause great hopefulness that such foresight will be secured beyond possible risk or recall. What Manchester has done is surely not beyond the powers of the first city in the world. It certainly needs courage to face the issues which a largeness of vision and comprehensive view of the future call forth. But without courage and energy what can be accomplished?

Output in America.

So much has been heard in praise of the American workman that the following comment will come as a surprise to many in this country. It is an abstract from a letter we have received from a practical man (an Englishman) who has had more than twenty years' experience in supervising big constructional work in the United States: "The enthusiasm of the American workman which is so often referred to in English papers is all bosh," he says. "They will do as little as they can get away with, and, carpenters and labourers in particular, do no more here than they do in England. As a matter of fact, I wish I could get hold of some English labourers to replace those I have now. All our common labour is foreign—Americans are useless. The best mechanics are nearly all British born or trained in England."

Hiring Plant.

"The secret of low costs and rapid construction in the States," he continues, "is organisation together with the use of all kinds of labour-saving devices wherever possible. The large amount of plant necessary for the complete equipment of a contractor's business is a bugbear which is not carried to the same extent here as in England. Except in the case of the largest contractors no great stock of plant is carried. Our builders in a smaller way of business prefer to hire their plant, and this is carried on to an extent unknown in England. Steel forms, excavators, hoisting plant, mixers, may all be hired for short periods, so that the builder knows exactly what his plant will cost for a certain job. The question of spreading first cost over an extended period does not arise, and neither does he have to make an allowance for 'overhead' during periods when the plant is 'eating its head off' in the yard for an indefinite length of time. It is a common thing here for one builder in a town to have a good stock of plant, which he hires out to other builders; this method helps him to get a return when he is not using the plant himself, and helps other builders who do not care to risk the initial outlay on getting a stock of their own."

St. Aldates, Oxford.

A careful study of the debate in the Oxford City Council with regard to the future of St. Aldates reveals a regrettable aloofness to the broader issues involved. All those who were present at the R.I.B.A. Conference in Oxford two years ago will agree that the present approach from the south is thoroughly unworthy of the city, and obviously the present clearances of insanitary property presents an opportunity that may not occur for another hundred years. Mr. J. A. Gotch expressed this point admirably in a letter to the *Times* a few days ago. The present deadlock would appear to have arisen from the misunderstanding between Christchurch and the Estates Committee. The proposal made, that the whole matter should have been referred to the Town-Planning Committee, which contains men of vision and perspicacity, was not carried unfortunately, but the Council wisely agreed to a delay, so that the whole matter may again be reconsidered.

The Ideal Home Exhibition.

The interest of the general public in house building is very real and general and the continued success of the Ideal Home Exhibition is a clear proof of

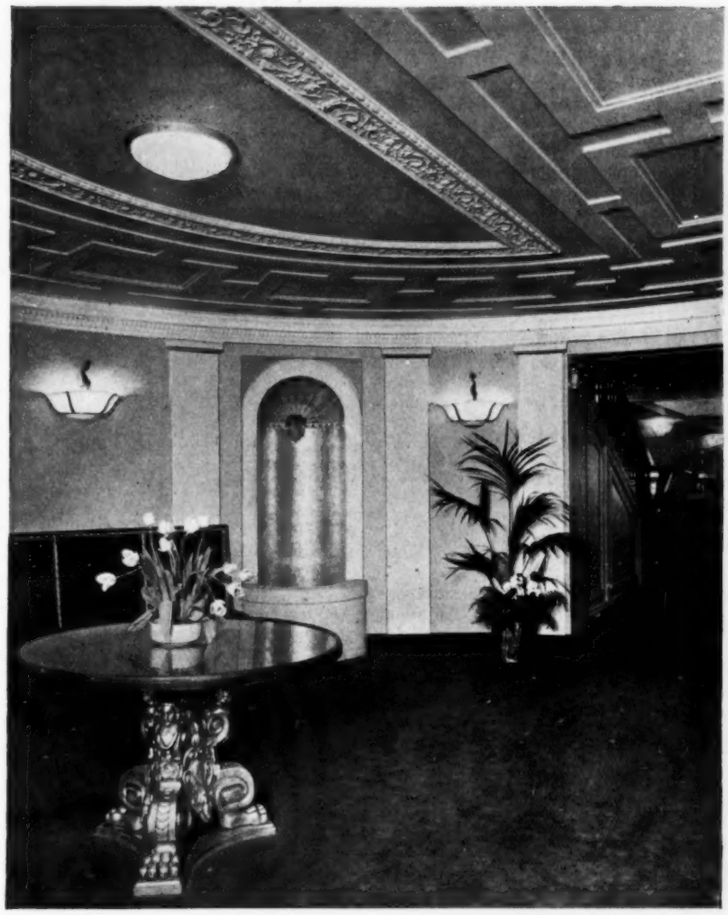
The Shakespeare Memorial Theatre, Stratford-on-Avon: Gutted by Fire last week.

it. The current exhibition is perhaps most notable for the clever illusory effect of the combined gardening schemes, the scene painting is admirably done and cleverly designed with regard to the actual gardening foregrounds. The Exhibition necessarily deals with the multitude of details and fittings in such a way as somewhat to obscure the problem of the house design itself, which, to tell the truth, has a very limited amount of architectural value, limited to some two or three examples. The tendency of such exhibitions is to overstate the case and the presentation of a quite simply treated series of rooms such as would satisfy a refined and educated taste would probably fail to be attractive. In one way we think these exhibitions might be a little more definite, and that would be by having a distinct section for samples of building materials, so that the study of materials for the construction of walls, roofs, windows and doors and the methods and materials for interior furnishing and equipment might be studied in a more collected way. It is just in this way that the Building Trades Exhibition, which opens in a week or two, makes a great appeal.

The Loss of Old Buildings. THE desire to create and enjoy a picturesque and pleasant home on a small scale is so widespread now that it has led to a greatly increased value for old materials, such as old oak and tiles, and consequently many nice old buildings are dismantled for the sake of their materials. In this way, as Mr. A. W. Powys rightly complains, we are losing many charming old buildings which a little timely repair would save to us. We doubt not that in some cases the old stuff is treated by competent hands and helps to give added quality to quite pleasant modern designs, but these are the exceptions, and we are losing old barns and cottages to an extent that leaves our country-side the poorer.

English Gothic. A BIRD'S-EYE view of English Gothic architecture is indicated in an excellent address by the Rev. T. J. Walker, M.A., and it should inform the general public with some clarity as to the general characteristics and qualities of our traditional Gothic which is full of an individual charm, whatever critics may choose to say as to its debt to French influence. We may claim to hold our own, and the best of our modern English Gothic proves it. There may be a hint of the French influence in the transepts of the Liverpool Cathedral, but the main character of the building, especially in its fine central tower and its extremely fine interior, one could hardly imagine to have been done by any but an Englishman.

Steel Houses and Architects. IN the *Journal* of the R.I.B.A. Mr. F. L. Jackman, referring to the intended erection of some thousands of steel houses in Scotland, suggests that the Institute should approach the Government with a view to the appointment of a qualified architect to assist Lord Weir's engineers in preparing "the few stock designs that will be required." He expresses the opinion that designs which are to be "repeated in such vast numbers" should not be entirely in the hands of those whose qualifications are practical rather than æsthetic. The appointment of an architect is, we think, highly desirable, but why should there be only a few stock designs to be repeated in vast numbers? Surely there will be ample scope for variety; and the architect should be allowed full opportunity to adapt his designs to the situations and aspects of the houses.



The Plaza Theatre, Lower Regent-street, W.: An Interior.
MR. FRANK T. VERITY, F.R.I.B.A., Architect

Secular Stained Glass. THE use of stained glass as a decorative adjunct for secular purposes has almost disappeared, probably mainly owing to its misuse during the last century. It is therefore of interest to find an influential Chinese gentleman sending a large order for stained glass for his treasure house and ballroom at Singapore. My Eu Tong Sen, O.B.E., requested that the windows, which were to include one of three lights covering an area of a hundred superficial feet, and nine lunettes, were to be treated in the Western manner, otherwise the artists were to be free to choose their own subjects and treatment. The work was entrusted to the Dublin Guild and is now finished. Before it went off it was exhibited in Dublin, and the public was given the rare opportunity of seeing a large collection of secular stained glass. The main window, designed and executed by Mr. Herbert McGoldrick, represents three dancers set in a conventional scene of silver sea and blue mountain, with subsidiary figures on either side. The lunettes, by Miss Kathleen Quigly, show nine classical myths, such as Diana and the Chase, Pan, and Neptune. Those interested in modern stained glass and its treatment can see some examples from Ireland in the current issue of *Architecture*.

The Shakespeare Memorial Theatre. THE destruction of the Shakespeare Memorial Theatre at Stratford-on-Avon may prove a blessing in disguise. There was certainly some picturesque quality in Messrs. Dodgson & Unsworth's design, but even if its picturesque Elizabethan character was considered suitable, it did not realise in plan and details the quality of an up-to-date theatre. It seems obvious that new buildings will be called for, and we may venture to hope that a well-arranged competition may give someone the opportunity to produce a sample of virile modern English architecture.

GENERAL NEWS

Change of Address.

Mr. Gordon Griffiths has removed from Whitchurch to 21, Dumfries-place, Cardiff, at which address he would be glad to receive new trade catalogues. Telephone: Cardiff 7768.

Ancient Monument.

Croft Bridge, Durham, has been scheduled by the Office of Works as an ancient monument.

Southampton Housing.

The Corporation proposes to build 1,200 houses on the Burgess-road site and 354 on the Shirley Warren site.

Amateur Art Society.

The annual exhibition of the Royal Amateur Art Society is to be held at 54, Mount-street, W.1, on March 22, 23, and 24.

Shakespeare Memorial Theatre.

The Shakespeare Memorial Theatre at Stratford-on-Avon, which was destroyed by fire last Saturday, is to be rebuilt on the same site, at a cost of £100,000.

Artist's Estate.

Mr. Albert Chevallier Tayler, artist, of Orsett-terrace, Hyde Park, W.2,, who died on December 20, aged 63, left estate of the gross value of £1,122.

London Underground Dance Hall.

An underground dance hall and restaurant is to be built underneath the Tivoli Theatre, Strand, by Messrs. R. E. Jones, Ltd., at an estimated cost of £30,000.

Roman Remains at Chester.

The base of a Roman column has been found during excavation work for an extension to the premises of Messrs. Brown & Co., Ltd., in Eastgate-street.

Salford Proposed Exhibition Hall.

A proposal is afoot in Salford to erect an extensive exhibition hall, which will be the largest in the Manchester area, on part of the cattle market site.

War Department Schedule of Prices, 1925.

This publication, which was reviewed in *The Builder* for February 19, can now be obtained from His Majesty's Stationery Office, Adastral House, Kingsway, London, W.C.2. Price 12s. 6d., postage 6d. extra.

Australian War Memorial.

Sir Bertram Mackennal, the sculptor, has accepted a commission to design and supervise the erection in New South Wales of a soldiers' memorial, to which the Government is to contribute £10,000.

Proposed School at Bushey.

Building will be commenced shortly on the large boys' school for the Royal Masonic Boys' Institution, of Great Queen-street, Kingsway, W.C., the total cost of which is estimated at over £250,000. Messrs. Davis & Emanuel & Henry C. Smart, of 73A, Queen Victoria-street, E.C. 4, are the architects.

New Tube Stations.

The new stations on the Morden Tube extension will be unique in railway architecture. The station at South Wimbledon will be built of Portland stone, with a canopy of reinforced concrete and a bronze facing. It will have a frontage of 146 ft., while Collier's Wood, which is to be similar in appearance, will have a frontage of 123 ft.

Manchester District Town Planning.

A plan for the development of parts of Lancashire, Cheshire, Derbyshire, and Yorkshire, covering over 1,020 square miles of territory, containing a population of nearly 3,000,000 persons, and with an assessable value of nearly £20,000,000, is presented in the report of the Manchester and District Joint Town-Planning Advisory Committee. New roads to the length of 256 miles and the widening of existing roads for 79 miles are suggested.

COMPETITION NEWS

Building Exhibition Essay Competition.

A prize of £100 will be given by the promoters of the forthcoming Building Exhibition, to be held at Olympia from April 14 to April 28, for the best essay on "My Impressions of the Building Exhibition, 1926." This competition will be open to all *bona fide* architectural and building students in the United Kingdom who are connected with a trade school, polytechnic, or university. The judges will be Mr. E. Guy Dawber, President of the R.I.B.A., Mr. H. S. Goodhart-Rendel, President of the A.A., and Mr. J. C. Squire, President of the Architecture Club.

Walker Art Gallery Extension, Liverpool.

In connection with the proposed extension of the Walker Art Gallery it has been decided to hold an architectural competition with awards of £500, £100, and £50. Designs will also be invited for a still further development. The extension will facilitate the hanging of the city's Permanent Collection, and at the same time leave space for the autumn and other special exhibitions of pictures.

Nurses' Home, Walsall.

The Walsall Board of Guardians propose to invite local architects to submit competitive plans in connection with the building of a nurses' home at the Infirmary. A prize of £50 is to be offered.

Model Workers' Homes, Moscow.

In the first contest of this competition the jury has made the following awards:—

One-storied Fire-proof Houses.—Second prize awarded to the German architects, Messrs. A. Klein and E. Serk.

Two-storied Houses containing Dwellings situated on Each Floor (*i.e.*, the whole of each Dwelling Located on one Floor).—Second prize awarded to Messrs. A. Klein and E. Serk.

Houses of the Ordinary Block Type with not less than Three Dwellings Each Located on Two Floors.—Third prize awarded to Messrs. A. Klein and E. Serk.

Envelopes containing the devices of unsuccessful projects are not opened and on request of the competitor may be returned to him, together with the projects.

We are informed that a second contest for Model Mansions will soon be announced by the Moscow Soviet.

Elementary School, Oldbury.

Oldbury U.D.C. invites designs for a proposed new elementary school, to be erected on a site at Bristnall Hall-lane, Warley, Worcestershire. Mr. W. S. Skinner, F.R.I.B.A., of Bristol, is the assessor. Premiums of £200, £100, and £50 are offered. Particulars may be obtained from Mr. Arthur Culwick, Clerk to the Council, Council Offices, Oldbury, Worcs., on deposit of £2 2s. Designs to be delivered by May 21.

Working-Class Dwellings, Daventry.

Daventry R.D.C. invites designs for working-class dwellings proposed to be erected in various parishes of the Rural District. The houses must comply with the conditions prescribed by the Housing (Financial Provisions) Act, 1924. A prize of twenty-five guineas will be awarded to the competitor submitting the most suitable plans and in addition the Council will pay the sum of £1 for each house erected by them to plans submitted by any competitor. Designs to be sent by March 23, to Mr. W. H. Abbott, Clerk to the Council, 4, New-street, Daventry.

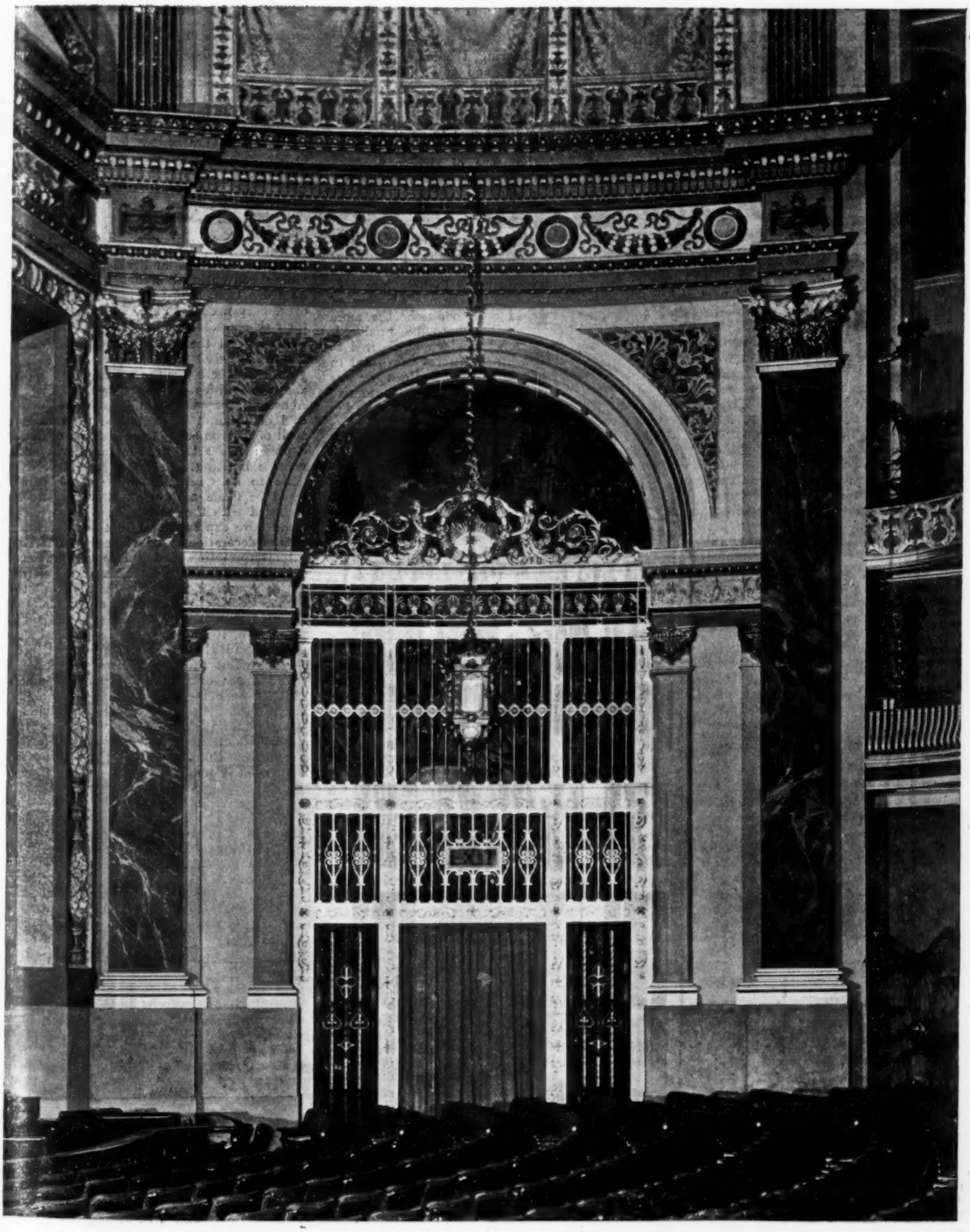
New Secondary School for Girls, City of Worcester.

We are officially informed that Worcester City Council has decided that the work of preparing the plans for the proposed new secondary school for girls shall be carried out by one of its own officials.

Competitions Open.

	Particulars published in "Builder."	Sending in date.
New Offices for West Bromwich Permanent Benefit Building Society. Limited to architects within a radius of fifteen miles of Birmingham. Premiums: £100, £75, and £50. Mr. W. Alexander Harvey, F.R.I.B.A., assessor. Apply to Mr. John Garbett, Secretary, 301, High-street, West Bromwich	Jan. 15	March 31
Public Hall, Topsham. Premiums £50, £40, and £30 respectively. Mr. Walter Cave, F.R.I.B.A., assessor. Last day for questions, Jan. 1, 1926. Designs to be sent in by April 1, 1926. Conditions from the Clerk to the Parish Council, Topsham, on deposit of £1 1s.	Jan. 1	April 1
*New Public Offices, Chingford. Apply Mr. Leonard C. Bowen, Clerk to Council. Deposit £1 1s. Premiums: £40, £30, and £20	Feb. 19	April 6
Papers on subjects connected with Heating and Ventilating. Two prizes of £10 10s. and one of £5 5s. offered by the Institution of Heating and Ventilating Engineers	Dec. 25	May 1
Isolation Hospital for Infectious Diseases, Doncaster. Mr. T. R. Milburn, F.R.I.B.A., assessor. Premiums: £200, £100, and £75. Apply, Mr. W. Bagshaw, Town Clerk, Doncaster, to whom all questions must be addressed by March 8. £1 1s. deposit required	Jan. 29	May 10
Australian National War Memorial, Villers Bretonneux, France. Limited to Australians under special conditions. Apply Military Headquarters in capital city of each State, or High Commissioner's Office, Australia House, Strand, London. £2 2s. deposit required	Dec. 25	May 31
Royal Society of Arts Competitions for Industrial Designs. Apply Secretary, Royal Society of Arts	Jan. 1	June
Incorporated Architects in Scotland: (1) Rowand Anderson Medal and £100: City Art Gallery and Museum; (2) Rutland Prize (£50) for Study of Materials and Construction; (3) Prize (£10 to £15) for 3rd year Students in Scotland; (4) Maintenance Scholarship, £50 per annum for 3 years. Apply Secretary of the Incorporation, 15, Rutland square, Edinburgh	Nov. 6	—
(*a*) Dance Hall, (*b*) Restaurant, (*c*) Variety Entertainment Pavilion, (*d*) Shops, for Aberdeen Town Council. President of the Incorporation of Architects in Scotland, assessor. Apply to Mr. A. B. Gardner, Director of Housing, Town House, Aberdeen	Feb. 26	June 14
Royal National Eisteddfod of Wales, Swansea. Competitions: (1) National Parliament House of Wales (Prize, £100); (2) Street Facade to a Large Stores (Prize, £25); (3) Set of Measured Drawings of Architecture (Prize, £25). Apply for programme to publishers, Messrs. Morgan & Higgs, Heathfield-street, Swansea (1s. 2d. post paid). Mr. Arthur Keen, F.R.I.B.A., Assessor	Nov. 6	July 15
Infectious diseases hospital, Blaydon, for 72 beds. (Date of application for particulars now passed)	Dec. 18	—
Pair of Working-class (Subsidy) Houses in brick, non-parlour type, with three bedrooms, for Diss U.D.C. Designs and prices invited. Apply Mr. G. E. K. Burne, Clerk.....	Feb. 19	—
Builder (Constructional Problem) Competition for those not over 25 years of age engaged in the pursuit of architecture and building. See announcement each week.	—	—
*Proposed new church, Monmouthshire	—	—
*Proposed new school, Gosport	—	—
*Proposed new hospital, Guisborough	—	—
*Downham Market U.D.C. Housing Scheme..	—	—
*Scheme for building large residences, Cairo	—	—

* Competitions when "warned" or vetoed by the R.I.B.A. are starred.



The Plaza Theatre, Lower Regent-street, W.: Auditorium Exit.

MR. FRANK T. VERITY, F.R.I.B.A., Architect.

THE TRAINING OF AN ARCHITECT AND NATIONAL ARCHITECTURE

IN the course of a lecture on this subject, given at the National University, Dublin, on Wednesday last, Professor A. E. Richardson, F.S.A., F.R.I.B.A., said there were two divisions into which building could be grouped. These were, respectively, mere building and fine building. By fine building architecture was meant. Mere building was crudity. Even utility building could be made fine in a broad sense. Construction and architectural expression were one and indivisable. If they thought of these analogous terms as structure they got near the truth. If they thought of construction as one branch and design as another, they were in danger of continuing subterfuges and shams. He did not mean to imply that the whole Renaissance movement was unproductive of certain masterpieces; on the contrary, his purpose was to show that the true building impulse had been partially stifled by the desire to envelop fabrics with antique detail.

Now the conditioning of construction and design in training could not begin too early. Diagrams showing individual components of materials were all very well, but these did not go far enough. When they had learnt something of brickwork, or stonework, it became essential to attempt some simple form of utilitarian design or even some sort of ornamental design which would bring to mind the possibilities of expression in these materials. Gradually, as their experience advanced, they should attempt compositions related to everyday matters which should be on a par with their knowledge of the several materials and their assembling.

By their acquaintance with the buildings of classical times they would have gained an idea of scale. The orders of architecture were useful in this regard. There was, however, a factor which was of even greater importance, and that was the human figure. Drawing from the antique and later from the life would teach the finest qualities of proportion. In fact, it was not going too far to say that everything invented by the human brain owed something to the physical construction of the human body. The modulus of scale in building was given by the proportions of the figure.

To recapitulate the subject of design and construction he would refer to the elementary principles which, apart from detail, governed the devisement of buildings. In this the plotting or planning of a building came first; in other words, such logic implied the embryology of buildings or fabrics. A designer began by arranging the lines of his projected building, whether it be a single cell or a large nucleus with cellular attributes, about a system of axes. He was likely to encounter two types of sites according to contingencies. These might either be enclosed between existing buildings, or on open spaces with a silhouette. History provided innumerable examples of plan groupings for specific buildings as well as types of buildings which were dissimilar. Some buildings were symmetrical and others assymmetrical. Some others were on regular sites, and yet others on odd-shaped sites. None of these sub-divisionings affected the issues of the cellular system or precluded the arrangement of the axes in sequence. The greatest contribution made to the scientific art was due to the planning achievements of French architects. As examples of systematic grouping French plans were most valuable. They must not be deceived, however, by the alluring qualities of decorative patterning; on the contrary, they should aim at a study of plan dispositions and try by experiment to see how they could adjust similar knowledge to the contingencies and the realities of the moment. The moulding of the fabric in embryo must be in sympathy with the plan traced. As the scheme was developed, so the faculty for imaginative construction came into play. The chief accents of the plan suggested the points of support, the disposition of the nucleus, and the attendant cells suggested in turn the type of covering, the dome, the vault, the roof, the ceiling, and other items. The question of material—that was to say, whether the building was to be of stone or brick with a steel core, in other words a composite construction, or whether it was to be of a homogeneous nature, such as reinforced concrete—did not affect the issue of structure in its embryonic stage. In other words, the fundamental principles were basic. The differences that existed between abstract design during the period of training and abstract design under actual conditions of practice arose from the fact that in the latter case the practitioner had the advantage of real conditions as well as the necessary resistance to help him produce an effect. The nearer the training of students approached real conditions the more thorough the work likely to be produced. There was another point which he desired to stress, and this, by far the most important in the discussion of construction and design, was concerned with construction of an imaginative kind. It was open to thought that present-day engineers might supply the necessary information, but the theory of engineers, at this juncture, was just as lacking in imagination as the theory of present-day architects, the truth being that ideas of the brilliant sort were not forthcoming at will. Once there was a general and collective urge to produce something transcending the ordinary, fine ideas would spring up unannounced.

Now we come to the vital clause which, if observed, endowed a building with that indefinable character which in its statement made science pale. A building of the first rank must have a dominant idea, and this idea must permeate every part. The modelling of a fabric on a sound plan, the lines of which were harmonically in sequence, would aid matters, but the pictorial concept or idea must also be in evidence. It must, in other words, accompany the structural or three-dimensioned theory. Many designers allowed the pictorial concept, which was abstract, from the outset a sort of castle in the air, to override their better inclinations for imaginative structure. Hence the predetermined character of elevations showing paucity of invention and limited knowledge. The danger of borrowing historical motives, without reason or inquiry into their purpose, on this showing became clear. The designer, instead of giving more force to preliminary grouping and imaginative structure, was often content to envelop a fabric with details which were inconstant and vacuous. He became a slave to passing fashion, and his buildings one after the other had the same fatigued look. There was a need for labels and ornamental description before the layman could tell whether such works expressed a church, a theatre or a railway station. All that might be termed the strait waistcoat of style should be avoided. Buildings should be stylish without being transcripts of past styles. In taking this line of thought he had in view the well-being of the scientific art. Mere novelty had no place in his ethics. The desire to be modern, as vulgarly understood, was a catch phrase; it was as bad as advocating the reproduction of old forms.

The object of architectural training was to level up the status and the amenities of social life. Fortunately it was being realised that a country possessing a fine artistic impulse would gradually gain conditions which would make people reverence their native land. Architecture was a learned profession, but it should be released from its esoteric fastness. Any advance in theory must be accompanied by a general uplifting of the trades. The operatives must be trained on systematic lines; the apprenticeship system must be put on a sure footing; there must be many more institutions, widely distributed, such as schools of technology and building. It was too much to expect a miracle to be brought about solely by architects, however good their training might be. Every country suffered from inefficiency in industry. There was a deplorable tendency to relegate artisanship to a low category. The uplift in all pertaining to building and the kindred arts must be general and universal. Architectural expression went deeper than the surface; it was something more than a plaster to be applied to relieve an ailment. When people awakened to the fact that beauty was essential to the dignity of life, and that real happiness resulted from something more than money-grubbing, the essential impulse for art would be in the ascendant. The whole aspect of affairs needed the most careful handling. There were plenty of architects capable of conserving the amenities of cities and villages and of providing conventional scenery, but these men needed patronage of the right sort, and, moreover, they needed skilled workers to interpret their schemes.

In Ireland there were the unrivalled local materials, such as the marbles and the granites. There was the revival of agriculture, and possibilities for every type of industry. Above all, brooding and mysterious, was the soul of Ireland. Few people understood the spell of environment in the shaping of national expression of art. Fine building was not expensive building, bigness in architecture has little to do with size. The smallest cabin could be made a thing of beauty if its lines accorded with the landscape; a great building could have expression without the adventitious aids of decoration and surface display. Rightful interpretation belonged to the province of architects trained to understand the needs of their country and of their own time. Under such circumstances architects would need to be not only technically efficient but idealists of the first rank. Their creed should be the gradual suppression of squalor, the incessant effort towards tidiness and order, the maintenance of honesty of purpose, and the will to work together for the national good. Architecture, if rightly followed, could do much to reinstate prosperity; it was more transcendent than science, for it satisfied the yearning for something tangible. From this catholic viewpoint it was apparent that the time has gone for accepting ideas at second-hand from any country. It was not too late to throw over the shibboleths of fashion and prejudice in favour of a procedure that nourished the very root of things. In art circles it was realised that the present invertebrate state of culture and loose art talk must give place to theories which were fundamentally sound and closely related to the fibres of the social system.

People had yet to learn how to live and how to enjoy life. The will to accomplish had to be deep rooted, for artistic activity depended as much on this as upon intellectual activity and business acumen. There was need for economy as well as simplicity in building, a need for a closer appreciation of relative values, and a closer regard for cause and effect.

Such ideas as the foregoing were occupying the minds of architects in every country. In a sense it was a world movement. No mistaken theories regarding ostentatious display could be countenanced. We had first to reinvestigate the structural laws of architecture, to provide, in other words, the reconstructed vertebræ which was essential to modify our ideas of fine art. Close reasoning had taught the lesson that taste could not be produced at will. It would result from the labours and energies of earnest men working in collaboration for the common good. It would, in other words, spring up almost unannounced once the desire for betterment became general. Mere cleverness or dexterity would not produce the desired result. Imported ideas would find barren ground. The truth went deeper in matters of fine art. The impulse must be national and unaffected.

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Eliminating the Architect.

SIR,—Some of your readers may have noticed, with more than passing interest, an advertisement in the Daily Press recently, inserted, I believe, by a well-known London general stores, in which the reader was requested to realise that he could be supplied with a house, designed, built, decorated and furnished complete, equipped to the table silver and flowers for the house-warming and, I assume, the inclusion of the lucky horseshoe over the front door!

One can almost hear the following wholly imaginary conversation between a shop assistant at such an emporium and a customer waiting for her purchase to be tied up:—

Shop Assistant: "Is there anything more you require to-day, madam?"

Customer: "Nothing more, I think."

Shop Assistant: "We are running a special line in houses and suburban villas just now. We can supply a semi-detached villa in the 'Neo-Brompton' style for £600 1s. 11¾d., giving you the choice of the semi or the detached portion, as you may prefer, or you might like to know of the charming houses in our special 'Tudor-Georgian' manner at our White Sale prices."

Again, may we not look forward to the visit at our own homes of the demonstrator from a general stores, who will ask to be allowed to show us a special line in three-bedroom houses complete with a bell in the bathroom, and a pocket garage. How much more helpful, too, if at the same time he can demonstrate a popular vacuum cleaner or a gramophone!

There is an aspect of this phase of modern commercialism which handicaps the professional architect, and which I venture to suggest can be redressed. As the R.I.B.A. are powerless to prevent any decorating or other firm advertising in so blatant a manner, is it not possible to admit these same firms to the Fellowship Class of the Institute, and thus circumscribe them in their wretched publicity efforts.

J. R. LEATHART.

The Devonshire House Site and the New Buildings Thereon.

SIR,—Art criticism to-day seems to wander from understandable comment, the result of knowledge, into what may be termed poetical effusion. In a recent Sunday journal a criticism appears from the pen of an "Architectural Correspondent" (whose identity is not disclosed), who observes that "in the treatment of the façades there is no indication that they consist of a steel-framed skeleton protected from the weather by a covering of Portland stone." That is the same sort of criticism which was levelled at the Tower Bridge, and it was carried still further by Ruskin, who objected to flowers on wall-papers, and to fruit on chintz chair coverings. The "Architectural Correspondent" should have remembered that all the stone walls of our best buildings have a brick backing—why should there not be a steel backing?

I think, however, it will be generally agreed that the buildings being erected on the Devonshire House site reflect the greatest possible credit on the architects (I only know them by name); the proportions of the façades, the disposition of the planning, the commanding dignity of the design as a whole, will, I think, appeal to all lovers of good architecture, and make one regret that there is not, just now, a little more of the same sort of treatment where commercialism is to be mingled with residentialism. As a building enterprise it constitutes a wonder, and that such enormous structures could be erected in about twelve months is a direct tribute to the skill and ability of the contractors and sub-contractors.

WM. WOODWARD.

15, Great James-street, W.C.1.

Outdoor Advertising.

SIR,—Your somewhat drastic remarks on outdoor advertising are very right and proper, and the Scapa Society has done a great deal to do away with the abuse of advertising. Whilst complimenting the Scapa Society it would be well to mention the Publicity Club of London, who have co-operated actively with them. But the Scapa Society would be in a very much stronger position if its leaders understood rather more about the economic function of advertising.

One night at the Publicity Club of London, during a joint meeting with the Scapa Society, it was remarkably interesting to hear the different reasons for doing away with objectionable outdoor advertising, and, while it was evident that there was general agreement and a joint resolution in favour of abolishing objectionable signs was unanimously passed, the reasons given by speakers were very different. The most startling thing of all was the ignorance of the function of advertising among the representatives of Scapa.

The professional advertiser is only too keen to have the objectionable signs removed, for it is his job to please the public. On the other hand, outdoor advertising is sometimes a blessing as well as a crime. A hoarding can hide the erecting of a building, and when the posters put up are on a par with those of the Wembley Exhibition posters, there is no harm done; on the contrary, not only is an eyesore hidden, but the posters in themselves are good. But a hoarding on the Sussex Downs is an eyesore, even if it contains an Academy masterpiece, and the very fact that it is an eyesore condemns it as bad advertising. An advertisement that does not please does not sell.

J. CRAVEN PRITCHARD.

A Northern Employment Bureau.

SIR,—Kindly permit me, through the medium of your columns, to call the attention of your Northern readers to the Employment Bureau of this Divisional Council. Divisional Council No. 1 operates for the members of this Association within the counties of Lancashire, Cheshire, Cumberland and Westmorland, in the West Riding of Yorkshire, and in North Wales, and the Employment Bureau maintains a register of all classes of architects', surveyors', and technical assistants in the building industry who seek appointments as assistants within that area. Its services are available, free of charge, to practising architects and surveyors and building contractors who may require such assistants.

Particulars of any appointment will be immediately despatched by the Hon. Secretary of the Bureau to those registered who may be qualified for candidature upon receipt by him of the appropriate information.

HUBERT A. HESKETH,
Hon. Secretary, Employment Bureau,
Divisional Council No. 1, A.A.S.T.A.
Liverpool.

Fancy Dress.

SIR,—It is unfortunate that in his very courteous and moderate letter Mr. Leverton does little to make me feel that my criticism of his paper ought to be modified. My conviction is that architects will never be able to design fluently in reinforced concrete until they are content to recognise its nature and frankly express it. This is not a question of cutting adrift from the past—on the contrary, we can maintain contact therewith, only if we are alive. Tradition does not dwell in the tomb.

G. MAXWELL AYLWIN.

Northern Architectural Association.

At the third annual meeting of the Teeside branch of the Northern Architectural Association, Mr. J. Clayton, L.R.I.B.A., of Darlington, was appointed President for the ensuing year. Other officials appointed were: Vice-chairman, Mr. R. R. Kitching, F.R.I.B.A., of Middlesbrough; sec. and treasurer, Mr. A. Harrison, P.A.S.I., of Stockton; associates' representative, Mr. E. C. Bell, of West Hartlepool; and students' representative, Mr. C. E. Westmorland, of Middlesbrough.

OBITUARY

Mr. H. L. Paterson, F.R.I.B.A.

We regret to record the death of Mr. Henry Leslie Paterson, F.R.I.B.A., of Sheffield, one of the best-known architects of that city. Mr. Paterson was the son of the late Mr. Alexander Paterson, for many years editor of the *Barnsley Chronicle*. From 1881 until 1891 he was assistant to various architects in London. He went to Sheffield in 1891 and practised for a year alone, but later entered into partnership with Mr. W. F. Hemsoll, of Sheffield. In 1903 the partnership was dissolved and Mr. Paterson continued on his own account. His competition successes with his partner included the Woofindin Convalescent Home, Sheffield, erected at a cost of £20,000, and several blocks of Council schools, including those in Morley-street and Upperthorpe. After the dissolution of the partnership he was responsible for the Walkley Free Library, Sheffield, several blocks of Council schools and private residences. He also designed cottages of the garden-city type in Sheffield and at Letchworth. Among his more important works of recent years were the Central Stores of the Sheffield and Ecclesall Co-operative Society, the Don Picture Palace, as well as shops and factories. Mr. Paterson was a member of the Council of the Sheffield Society of Architects and Surveyors, on which he had served since 1902, and he had almost completed two years as President of the Society. He was also a member of the Council of the R.I.B.A. He acted as Hon. Lecturer on several occasions in the Architectural Department of Sheffield University.

Mr. John Wayland Benwell, F.R.I.B.A.

The death has recently occurred of John Wayland Benwell, F.R.I.B.A., a well-known architect in the North of England. Mr. Benwell came to Carlisle over forty years ago as assistant to the late Mr. J. C. Ferguson, F.S.A., and after further experience in London, Leeds, and Bolton, he settled down to practise in Carlisle. Although somewhat reserved in manner, he made many friends, and was entrusted with many important works, amongst others a charming restoration and addition to Dalston Hall, Cumberland; the Bakewell Almshouses, Balderton, Notts; Garden City and Housing Scheme, St. Ann's, Carlisle; additions to Netherby for Sir Richard Graham; a residence at Crofthead, for Mr. Fergus Graham; new branch office, Carlisle, for the National Provincial & Union Bank, Ltd., and a mansion at Bars-cobe, Kirkcudbright. He designed several war memorials and the Rawnsley Memorial Tablet in the Cathedral was also his work.

Mr. Benwell was elected an Associate of the R.I.B.A. in 1882, and a Fellow in 1917. About three years ago his health broke down, and since then he had been unable personally to carry on his professional work. A large number of professional colleagues (with whom he was very popular) and other friends, including many prominent contractors who had worked under him, were present at the funeral service.

At the last meeting of the R.I.B.A., the death was announced of Mr. John Harold Kennard, F.R.I.B.A.; Mr. Richard Wellings Thomas, F.R.I.B.A.; and Mr. Leonard Harris Dutch, A.R.I.B.A.

Mr. C. H. Ashworth, F.R.I.B.A., F.R.I.A.I. M.I.C.E.I., of Messrs. Ashworth & Smith, architects, Dublin, died recently.

A Mussolini Tower.

Under the auspices of the Fascista Society of National Propaganda a scheme has been launched for building, as a war memorial at Milan, a tower that shall surpass the Eiffel in height and in interest of structure. This tower is to bear the name of Mussolini, and will be called the Tower of Victory. At the summit it is intended to install a powerful "wireless" station and an astronomical observatory. The base of the tower will serve as a war museum. It is expected to be completed by 1928.

NOTES ON AMERICA—VI

THE PLANNING OF OFFICE BUILDINGS.

BY F. E. BENNETT, A.R.I.B.A.

IN the consideration of sites and the manner of disposing buildings upon them, the peculiarities of the American city have an important bearing. With streets cut on the gridiron plan and sites left in true square or rectangular shapes, much of the first difficulty experienced in European cities of making a building a reasonable shape within the limits of an irregular site does not exist. Whether the site is suitable for an office building is more or less easily determined and the fact is generally known beforehand by all those in the district who are interested in building development.

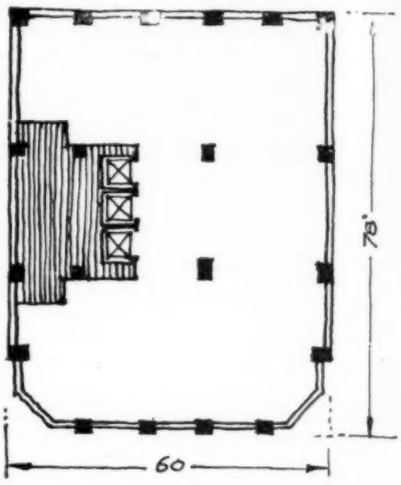
During the progress of planning and the changes of ideas which have taken place during the last thirty or forty years, many of the sites originally considered not very good for office buildings are now, on the other hand, thought much better of and used successfully. This is due to a realisation of the economic value of having a front court occupying a large portion of the site so that natural lighting of a very good kind is provided. It has been found that office space at a depth more than 25 ft. from a window does not let very easily—if at all—and certainly does not command a rent sufficient to justify itself, so it is now a question of arranging a plan in which none of the office space is more than 25 ft. from a window. On this basis, all wings of the building except where there are lifts, etc., should not be wider than 60 ft., allowing 10 ft. for a corridor between the offices. The plan given (p. 429) roughly shows the disposition of an office of this modern type, where the large front court is introduced. When first used, this was considered a very dangerous thing to do, but the accommodation met with such good demand that the idea has been repeated in a number of buildings since. To set about a plan, then, on a given site, the building is laid down with no part wider than 60 ft., except where lifts, toilets, etc., occur, thus allowing two offices of 25 ft., with a corridor of 10 ft.

In some buildings where the site is narrow and the lifts range along one side wall, good lighting is obtained by leaving the framework of the lifts unenclosed except with metal grilles, including the doors—and having large windows on the outer wall. By this means a light flows across the lift-shafts and through the grilles and is ample for the internal corridors.

The plan for the Kanawha Valley Bank, by Mr. Alfred C. Bossom, shows a distribution with a very large percentage of the site given up to courts, so as to provide good natural lighting. There is no artificial light in the corridors, but the elevator hall is provided with a window. The dark area—the portion which misses the daylight at the inner angles—has been given over to stairways, toilets, etc. The eight lifts are cleanly arranged and hung up on the outer wall at the back.

A certain conventional form seems to be establishing itself in the plan of ground floors. With the steel points fixed, the elevators and their doors fixed, and also the stairways and fire towers; the parts of the ground floor are definitely restricted in arrangement. A comparatively narrow vestibule leads into the building and is flanked on each side by the lifts. It is quite direct and emphasised on the outside by a prominent and perhaps richly decorated doorway.

The plan of the building for the American Radiator Co., by Raymond Hood, is interesting for its directness and simplicity. It has some of the characteristics of the Tribune Tower and shows a similar splaying of the forward corners, an expression which has considerable value on the elevation. Here it will be seen that the elevators open direct into the office space, an arrangement which while appearing to be a little intimate, is, at the same time, a very satisfactory one for some types of business. If, on the other hand, it is not desired, a little vestibule may be constructed by linking up partitions to the two stanchions in the centre of the plan.



PLAN SIMPLIFIED
AMERICAN RAD. CO. BLDG.
24 STOREYS.

One type of plan frequently occurs where the building occupies a complete city block. The building faces on to streets at all four sides, leaving a square light well in the centre, which, being glazed in over the ground floor, makes a fine vestibule to the building. Around this vestibule there are usually placed various men's shops, always including a barber's and a tobacconist.

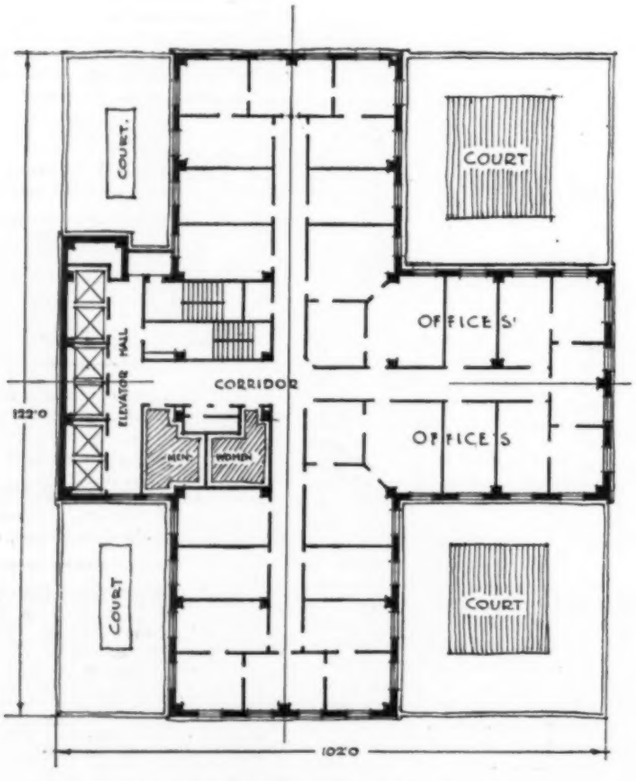
With New York zoning laws a tower may be built to any height if the site is of sufficient size to provide the requirements of the zoning laws. But the tower, it is found, is economically unsound for letting purposes after a certain height: a point is reached where 50 per cent. of the area is taken up for lifts, toilets, etc. It is said the Woolworth Tower has never paid its way, but only justifies itself as an advertisement.

It is the practice in such buildings to divide the lifts into two groups of local and express, the latter to serve floors in the tower only. There are some cases where, despite a central tower over the main building, the lifts have not been run from the ground direct into the tower. In the Bush Building, New York, it is necessary to change into a smaller lift to reach the top of the tower (diagram B, p. 429). As a matter of practice it is a very annoying thing to have to do, and is only bearable if one wants to see the view from the top.

When a building runs up to a great height, perhaps thirty stories, the question of elevators becomes possibly the most important item in the plan. If the tower forming the upper part is placed centrally—the most natural position for æsthetic reasons—the lifts come right down into the centre of the main floor, and break up the most valuable floor area of the building (see diagram A). In the case of the Hecksher Building, New York (diagram C), the tower has been placed at the rear of the building, with one side of it running down at the back of the site almost on the building line. This arrangement simplifies the lift problem very much. Whether or not the difficulties in design brought about by shifting the tower in this way are warranted for the sake of the lifts is another question.

It may be said that the lifts are the real vertical circulation and become a sort of "spinal cord in the backbone."

Stairways in these office buildings are merely fire escapes and are seldom used. There are



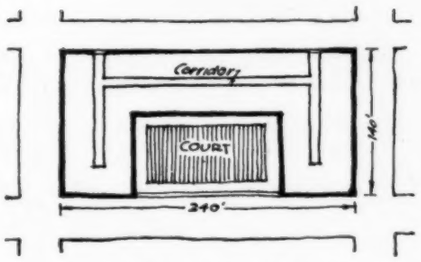
Plan of the Kanawha Valley Bank.

at least two, and perhaps constructed with open-air cut-off at each floor. Although sometimes used for circulation from one floor to another, they can never be a conspicuous or an architectural feature, because the law requires them to be closed in with fireproof walls and doors. The habit of using lifts has been thoroughly acquired, and Americans rather disdain stairways, even if they have to ascend only one story. Again, owing to the latitude of the law, the fire stairs, which are not required to be naturally lit, are put into the dark spaces of a plan.

The widths of the office units vary a good deal according to the distance between the steel stanchions. The engineers in America recommend not less than 15 ft. spacing of stanchions —or "columns," as they call them—and a maximum spacing of 22 ft. Sometimes, especially on ground floors, this maximum width is greatly exceeded, one case in New York being as great as 40 ft.

Corridors are inclined to be designed on very similar lines in new office buildings. Architects are aware of the tone which corridors can give to a building, and how necessary it is, after the main hall has been made interesting, to carry some of the decoration to the upper floors. Care is taken to make the corridors sufficiently wide and of increasing width as they near the lifts. Sometimes elaborate and expensive marble wainscotting and floors are used, but more faith is put in designs which incorporate harmonious colours, adequate lighting, and encourage meticulous cleanliness. Owing to the frequent changes of occupancy causing a constant shrinkage or expansion of corridors in length, and perhaps in width, it is sometimes the practice to put down cement floors continuously over the whole of the floor area—except in the lift lobbies—and then to put down soft tiling, a material easily repaired or removed. Such floors are noiseless, and a rather pleasant change from hard stone surfaces. The use of materials with bright reflecting surfaces is much in fashion, owing to the practice of giving over all natural light to the offices and eliminating it from the corridors. By doing this the absence of daylight is not so noticeable, and fewer electric lights are needed.

While it is sometimes a great convenience to have toilets ventilated and lit artificially, architects seem to prefer to place these compartments on small back courts where such exist, as the space facing on a back court would not be very valuable anyway. The American practice is to provide ample toilet facility on every floor, space usually being found for it without much sacrifice of office area. Wash-basins are placed openly in the offices, with no surrounding partition,



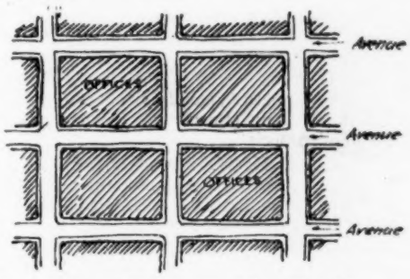
MODERN OFFICE PLAN

and the plumbing lines from them run on inside stanchions near the sides of the corridors. A novel idea is the introduction of shower baths to each suite of offices, so that when a man arrives rather warm from his journey to the office on a hot summer morning he may refresh himself before starting work.

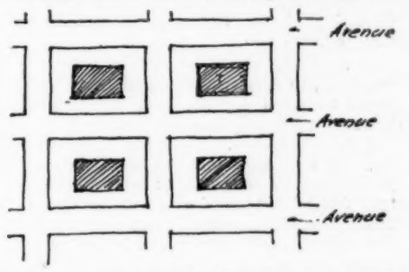
Mail chutes, made of strong metal and glazed in front, are a usual part of the equipment. They run in vertical lines through the building and empty into a box in the hall. Letters are put into them at any floor, and if one package is too large and jambs, the glazing allows it to be found without difficulty.

Of course, no plan can be taken very far without considering the financing. It may be wrong to talk of financing in the planning of the building, but at the same time it follows so closely with any projected arrangement that it really becomes part of the initial scheme. This, in fact, is the way in which many of the modern American architects are looking upon the subject. They find it necessary to draw out a number of alternative schemes showing different arrangements of office space and to compile with each a careful estimate of the cost of building, and the rental return which could be expected. The questions of loans, overhead costs, maintenance costs, fees and expenses are factors which the architect is sometimes called upon to deal with, and he recognises the importance of being able to handle them as part of his duties. By being able to advise accurately on these questions he obtains great confidence from those who are trusting him with building work. Sometimes in a co-operative enterprise an architect is invited to come into a speculative scheme if he will risk his time preparing sketches and plans and estimate figures. One hears of the existence of a number of individuals and organisations anxious to take a share with the architects in the planning of office buildings. They call themselves experts of various sorts, claiming specialised knowledge of building organisation and management, Possibly, as buildings are so huge and the responsibility on one individual is inclined to be a severe strain, such experts can be helpful, but at the same time no mention was made of them to the writer by any influential architects with whom he had the privilege of talking.

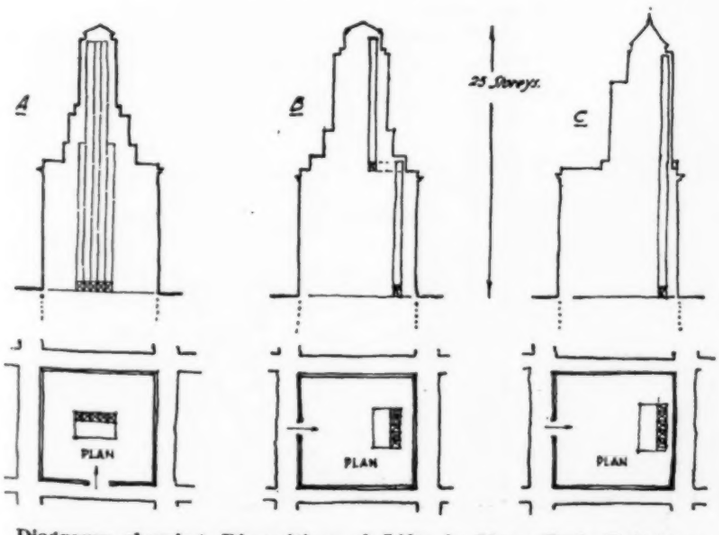
One note more, bearing on the subject of this article, should be included before finishing. If the business part of New York were laid down with the road space made sufficiently large to accommodate the pedestrian traffic comfortably, and the buildings themselves given a true relationship, instead of a plan like this:—



the result would be something like this:—



Here we see that the buildings become merely a series of sky-scraping towers in the centres of squares.



Diagrams showing Disposition of Lifts in New York Buildings.

MEETINGS

MONDAY, *March* 15.

Royal Institute of British Architects.—Mr. G. H. Duckworth on "The Making of a Slum." 8 p.m.

Edinburgh Architectural Association.—Annual General Meeting of the Associate Section. At 15, Rutland-square. 8 p.m.

TUESDAY, *March* 16.

Society for the Promotion of Roman Studies.—Mr. J. Curle on "The Romans on the Upper Rhine." At Burlington House, W.1. 4.30 p.m.

WEDNESDAY, *March* 17.

L.C.C. Central School of Arts and Crafts.—Sir Banister Fletcher on "Georgian Domestic Architecture, and Georgian Public Buildings."

The Institution of Structural Engineers.—Mr. A. Knappen on "Notes on the Restoration of the Palace of Versailles and the Trianon." At 296, Vauxhall Bridge-road, S.W.1. 8 p.m.

THURSDAY, *March* 18.

Society of Antiquaries.—"Some Majorcan Burial Caves," by Mr. W. J. Hemp; "A Chambered Cairn at Capel Garmon, Denbighshire," by Mr. W. J. Hemp; "Final Report on the Excavation of the Saxon Village at Sutton Courtenay," by Mr. E. T. Leeds. At Burlington House, W.1. 8.30 p.m.

FRIDAY, *March* 19.

Glasgow Architectural Craftsmen's Society.—Mr. J. J. Waddell on "Greek Thomson." At the Royal Technical College. 7.45 p.m.

Institution of Structural Engineers (Irish Branch).—Mr. Ewart S. Andrews on "Regulations for Steel-Framed Buildings." At the University College, Dublin. 8 p.m.

Institution of Structural Engineers (Yorkshire Branch).—Mr. C. A. Harding on "Some Preliminary Factors Affecting the Design of Industrial Buildings." At the Great Northern Hotel, Leeds. 6.30 p.m.

SOCIETIES AND INSTITUTIONS

SOUTH WALES ARCHITECTS.

The fifth annual supper of the Eastern Branch of South Wales Institute of Architects was held at the Queen's Hotel, Newport. Among those present were Major W. E. Lloyd, M.Inst.C.E., Messrs. C. E. Tebbs, A.R.I.B.A., C. E. Page, L.R.I.B.A., Ivor Jones, A.R.I.B.A. (Hon. Secretary, South Wales Institute), H. Teather, F.R.I.B.A. (Hon. Treasurer), W. S. Purchon, M.A., A.R.I.B.A. (Hon. Secretary, Cardiff Branch), Horace Jones, L.R.I.B.A. (Hon. Secretary, Newport Branch), J. L. Rees, L.R.I.B.A., M.R.S.I., P. R. Fry and J. E. Lenton (Assistant Hon. Secretary, Eastern Branch), A. E. Jenkins, Newport (President, South Wales Institute of Builders), and T. J. Hill (President, Newport Master Builders' Association).

Lieut.-Col. E. H. Fawckner, R.E., T.D., F.R.I.B.A., chairman, in proposing the toast of "The Royal Institute of British Architects and Allied Societies," remarked that the amalgamation of the Institute and the Society of Architects brought in a large number of members. He was honoured to be asked to take the chair as one of the oldest members of the Cardiff Society, of which he was President twenty years ago.

Mr. Ward, President of the South Wales Institute, in response, declared that the Royal Institute stood for the best in architecture: it was out not only to safeguard the profession, but also the public. Education had been taken up, and they now saw the result in excellent work done by young men; young men should take full advantage of education facilities. He was astounded recently by the splendid work of the students at Cardiff. The South Wales Institute was well in the front rank of allied societies; they had 263 members.

"The Visitors" was given by Mr. F. Swash, F.R.I.B.A., and responded to by Mr. T. Alwyn Lloyd, F.R.I.B.A., Chairman of the Central Branch.

EAST RIDING ARCHITECTURAL SOCIETY.

The annual dinner of the York and East Riding Architectural Society took place at the Royal Station Hotel, York. Major J. Malcolm Dossor, of Hull, president of the Society, presided, and amongst those present were Messrs. E. Guy Dawber (P.R.I.B.A.), H. L. Paterson (President of the Sheffield and South Yorkshire Architectural Society), T. Butler Wilson (Leeds and West Yorkshire Architectural Society), S. Wilkinson (consulting architect to the L.N.E.R. Co.), J. J. Brownsword, W. E. Parkinson, R. Jackson, E. A. Pollard, H. Andrews, W. H. Brierley, A. Cowman, F. J. Forty, D. Harbron, F. J. Horth, L. Kitchen, S. Needham, J. E. Reid, J. S. Syme, S. G. Highmore, J. Vause, and J. P. Wilde.

Mr. S. Wilkinson proposed "The Royal Institute of British Architects," and referred to the successful results obtained by the amalgamation of the various allied societies and the Royal Institute.

Mr. Guy Dawber, in reply, said they were going through extraordinary changes, for the world was getting more democratic and less secure. The practice of the architect was changing and they were all feeling its effect. The large country house was now more or less a thing of the past. In the old days it was all aristocracy and financial power, but to-day the aristocracy had but little power, and probably less money, and the financiers were shy of putting their money into domestic bricks and mortar. He did not think there was a living architect who would be called upon to build a Harewood, a Castle Howard, or a Blenheim. As a result of the change the great examples of modern architecture were confined to the public and commercial buildings in the towns and cities. In London there was the need for some controlling hand and some artistic authority to prevent the disfigurement of fine sites by absolutely inappropriate buildings.

Mr. H. L. Paterson proposed the toast of "The York and East Yorkshire Architectural Society."

The president responded, and said he was delighted to hear that Mr. Guy Dawber was about to enter upon a vigorous campaign to arrest the spoliation of their countryside. There was scarcely a suburb in a rural district which was not being robbed of its natural beauties by the erection of buildings of most unsuitable materials and design, and without any consideration of lay-out. That was, of course, largely due to the shortage of dwellings and the scarcity of materials and skilled labour, but much could be done by the education of public opinion by the employment of trained and competent architects, and by the wise use of the extensive powers granted to local authorities and property owners by the recent Town-Planning Acts in seeing that the countryside was developed in accordance with its natural beauties. He was grieved to see the speculative builder making his entry into some districts with his ugly brick buildings with flat blue slate roofs, but he thought that if the Town-Planning Acts were wisely put into force a very great change could be effected in the present rapid developments in building operations throughout the country. He hoped Mr. Dawber would meet with every success in trying to prevent that development from extending.

Mr. E. A. Pollard proposed "The Yorkshire Group," and Mr. T. Butler Wilson, in reply, urged the importance of education amongst the younger members of the profession.

Mr. S. Needham gave "The Guests," to which Mr. J. J. Brownsword responded.

SHORT COURSES OF INSTRUCTION FOR ART TEACHERS.

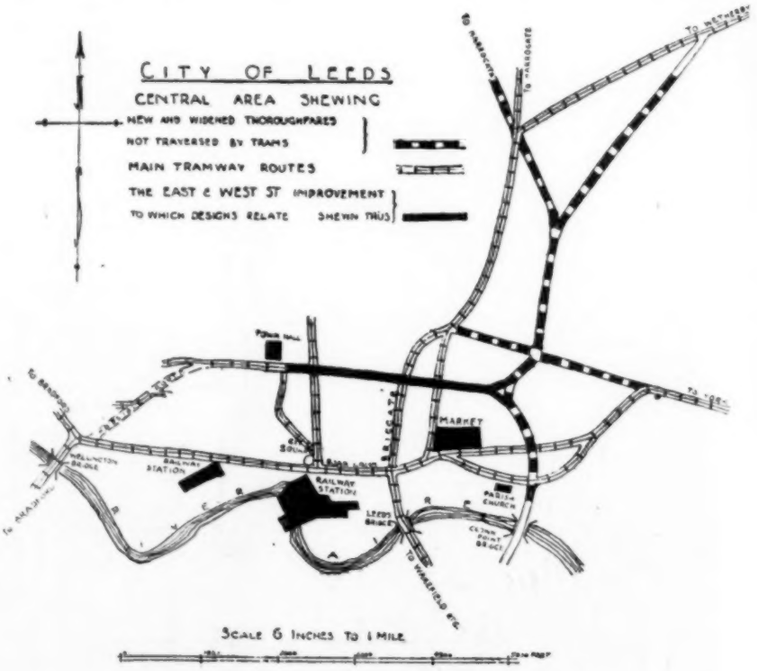
The Board of Education is arranging for a short course of instruction for teachers in recognised schools of art and art classes in England and Wales who desire to refresh or extend their knowledge of matters pertaining to their work, more particularly in regard to the application of art instruction to the requirements of industry. The course will be conducted at the Royal College of Art, South Kensington, London, S.W.7, from Monday, July 19, to Saturday, July 31, 1926, both dates inclusive, and will consist of:—(i) Lectures by well-known men upon subjects of general artistic interest; (ii) conferences and debates on matters pertaining to school of art organisation, instruction, &c.; (iii) study in the Victoria and Albert Museum (for those who desire it) and visits to galleries, ancient buildings, &c.; (iv) personal work. Problems will be set to meet as far as possible the requirements of those admitted to take the course; the subjects will include design for illustration, for manufacture, for crafts, &c. Life models will be provided.

It is hoped that it may be found possible to arrange for certain lectures to be attended by teachers in recognised schools of art and art classes in addition to those selected to attend the full course. If satisfactory arrangements can be made, particulars regarding this will be announced later. In any case no travelling expenses will be payable in connection with attendance at these lectures. Teachers who wish to attend the course should apply to the Board on Form 106f. U. as soon as possible, and in any case before April 19, 1926. The Board cannot undertake to consider applications submitted after that date. Applicants will be informed as soon as possible after that date whether they have been selected to attend the course. The selection will be made by the Board.

THE NEW LAW OF PROPERTY.

Reading a paper on this subject at the last meeting of the Surveyors' Institution, Mr. C. P. Sanger said that shortly the effect of the new legislation was that, with unimportant exceptions, all land in this country is held in common socage. A legal estate must be perpetual or for a definite period; it could not be vested in an infant, nor could there be a legal estate in an undivided share. Thus each parcel of land, which, however, might be divided horizontally from another parcel, was vested in law in either one person or in two or more persons as joint tenants.

Having described the chief ways in which the owner or owners of the legal estate can deal with the land, the speaker said a mortgagee never has the fee simple. A legal mortgagee has either a term of years or a legal charge. The legal mortgagor, until the mortgagee has taken possession


CITY OF LEEDS
CENTRAL AREA SHEWING
NEW AND WIDENED THOROUGHFARES NOT TRAVERSED BY TRAMS
MAIN TRAMWAY ROUTES
THE EAST & WEST ST IMPROVEMENT TO WHICH DESIGNS RELATE SHEWN THUS
MARKET
RAILWAY STATION
SCALE 6 INCHES TO 1 MILE

Leeds Improvement Scheme. (*See p.* 432.)

or appointed a receiver, has certain powers of leasing and accepting surrenders of leases without the mortgagee's consent; and the mortgagee, after he has taken possession or appointed a receiver, has similar powers without the mortgagor's consent. The mortgagee can sell and, on a sale, can convey the fee simple.

The short experience we had had of the new system had revealed some difficulties. He would mention two. The first was this: The Settled Land Act, 1925, said that land subject to a family charge, such as a jointure, was settled land. Many persons who had bought a plot of land forming part of a large family estate had been content to take an indemnity against the jointure. The difficulty was that now on a sale the purchase money would have to be paid to trustees, and the vendor would have no right to receive it until the jointress died or released. The other difficulty was this: Under the law before 1926 anyone who acquired land with notice of a restrictive covenant was bound by that covenant. But this had been changed. Restrictive covenants imposed since 1925 had to be registered and did not bind the land until registered. If A sold a plot of land to B, who entered into restrictive covenants with A, and then immediately afterwards mortgaged to C, A would not have had time to register, and C would apparently be free of the restrictions. This could be got over by imposing restrictions on the estate and registering them before the estate was sold in lots. He believed that the new system would work well. It would be necessary to legislate to remove a few difficulties and to make a few points clear.

ST. PAUL'S CATHEDRAL RE-EXAMINED.

Lecturing on St. Paul's Cathedral at the Central School of Arts and Crafts, Sir Banister Fletcher, V.-P.R.I.B.A., gave a brief glimpse of the remote history of the earlier cathedrals and of the glories of the famous "Old St. Paul's," immortalised in Harrison Ainsworth's book, and burnt in the Great Fire of London. He then described, part by part, the features of the present building, which dates from 1675–1710—the imposing west front, with its double colonnade of coupled columns; the lofty nave, now the only part open to the public, with its remarkable saucer dome and lunettes; the vast crossing under the dome; the chancel, with its gorgeously carved choir stalls and organ case by Grinling Gibbons, and iron gates by Jean Tijou; the sanctuary, with its modern colonnaded baldachin; the fine transepts, with their semi-circular porticoes and sculpture; and lastly, the dome, borne on a high columned drum, given an appearance of strength by the filled-in spaces, and terminated by a lantern and cross. Sir Banister described by the aid of diagrams the triple construction adopted for this dome, and the clerestory construction of the nave, with its outer screen. Next week Georgian buildings will be studied.

INSTITUTION OF HEATING AND VENTILATING ENGINEERS.

At a meeting of this Institution at Caxton Hall, Westminster, on March 3, Mr. Joseph Meech, A.M.I.E.E., lecturing on the subject of "Electric Motors for Heating and Ventilating," said they had to adjust themselves and conform to the demand for cheapness, so that a never-ending compromise was taking place between the ideals of the designer and the demand for economy in expenditure. He dealt fully with the design of various types of motors used for fan and pump work, methods of driving, speed control and how to attain silence. He explained the variation of speed and power with voltage variation which would enable a contractor who had a motor in stock to utilise it on a voltage for which it was not primarily designed. The cause of the very objectionable fault, known as hunting and surging, which sometimes develops with variable speed motors and cause of sparking were considered. The lecturer concluded with notes on the power factor, starting and controlling devices, and urged the consideration of the advantages of remote control for motors scattered over a building.

THE PLANNING AND EQUIPMENT OF THE SMALL HOUSE.—IX

By EDWIN GUNN, A.R.I.B.A.

BAYS, PORCHES, AND OTHER EXCRESCENCES.

The projection of features from the main outline of a house in such a way that they do not appear as afterthoughts may seem a simple matter but is a severe test of a designer's capacity. The undistinguished bay of the suburban "villa" is, as a rule, one of the most wretched efforts of hackneyed commonplace, and the projecting porch on posts or brackets seldom shows a trace of fitness or obvious attachment.

Bays often discharge useful purposes for correction of aspect or expansion at cramped points considered from within, and they may confer a certain geniality upon a house from without. The small house hardly allows this character to develop to its fullest extent, evinced by such a noble example as Moyns Park, Essex—dependent for its character on its rhythmic composition of tall bays alternating with gables. A bay in a small house can, however, be made to show with advantage definite intention rather than a tame nondescript quality—it can be flat or bulging, wide, or high. It must always appear ample—the miserable triangular flower-pot niche favoured by seekers for the "picturesque" is merely absurd. To achieve any such definite end, the essentials of form and structure must be made to conduce, and the following components (which have, in any case, to be settled somehow) should be carefully considered with the intention in view. The *form* of the bay may be circular, segmental, polygonal, square, or canted; and if square or canted the length of the return sides in relation to the front must be decided; and, in the latter case, the angle of the canted face also. The type of *window* will presumably follow that used in the house generally, but both will interact and (for instance) the general type may be chosen because bays have been decided upon. The *covering-in* of bays, whether by flat roof, pitched roof, or overhung story or gable, has the most important influence upon their excrescent appearance or otherwise.

The proportion and angle of bay sides are closely related. In a sash-window bay equal faces and 45 deg. cant are almost essential, but a spice of character is given if the whole form can be made to approach the half octagon, projecting the canted faces by a square return from the main wall, making these sides perhaps one pane wide. This well conforms to the opulent character of sash-window architecture. The bulging bays of Georgian Lyme Regis are full of suggestions for such treatment and also for circular and segmental bays. With the foregoing exception, the even-sided 45 deg. bay is generally the most unpleasing form of any, and casement bays or oriels look very much better if the canted angles are over or under 45 deg. and the front face markedly dominant—say, three lights wide with a single light return.

The considerations of angle and face size lead naturally to that of covering. A sash bay, unless to a parapeted house, virtually asks for a flat roof, with some form of cornice—not necessarily the full classical outfit, though a hipped pyramid has sometimes been successfully used. A casement bay, as well as by either of the above coverings, may be roofed independently by a pitched roof, by the gable-end of a main roof bracketed over, by a projected hipped or gabled roof, or by the overhang of an upper story. Though a flat roof and cornice will provide an adequate appearance of finish to a bay, an independent pitch roof, unless fairly steep, seems insignificant and wants cocking up. The overhanging story or overhung roof is, on the whole, the most complete way of absorbing a bay into unity with the structure; see p. 186 (The Builder, Jan. 29), and below. In neither case is it advisable to make the bay so ponderous as to appear to carry the overhung portion. A flattish bay or oriel covered by the main eaves may be quite successfully used provided that the main roof is of flattish pitch; if it is steep, there is appearance of insufficient support.

Porches should invite—a mean doorway damns any house. It is sometimes possible to roof two bays and a porch continuously by a lean-to, but generally an independent lean-to, whether on posts or brackets, is better avoided. If used the supports should not appear too strong for their job—nearly as gross an offence as making them really too weak. A recessed porch will generally have a pleasant effect and be readily contrived. Given a door frame about 3 ft. 6 in. over all, the porch front, either by splay or expansion, should have a minimum opening of 4 ft. 6 in. and a depth of no less than half the width, preferably more. If an arched porch is attempted the springing may quite well be kept down to 4 ft. 6 in. and still give ample head-room and a sense of shelter. Remember always that a porch has a definite object—to allow waiting visitors and parting guests to receive protection, both from rain and winds. Other excrescences — loggias, outbuildings, and the like—should never be accidental, but comprised under a run-down from the main roof-slope if the style is informal, or as carefully planned for as any other component of a formal design.

A Small House with Overhung Roof. Mr. Edwin Gunn, A.R.I.B.A., Architect.

LEADING CONTENTS.

	PAGE
RE PLANNING LONDON	421
NOTES	422
COMPETITION NEWS	424
THE TRAINING OF AN ARCHITECT AND NATIONAL ARCHITECTURE	426
CORRESPONDENCE	427
NOTES ON AMERICA.—VI	428
SOCIETIES AND INSTITUTIONS	430
PLANNING AND EQUIPMENT OF THE SMALL HOUSE—IX	431
DOMESTIC HEATING	437
THE "BUILDER" CONSTRUCTIONAL PROBLEM COMPETITION	438
SURVEYORS' INSTITUTION ANNUAL DINNER	438
SPECIFICATIONS.—IX	440
WEEK IN PARLIAMENT	441
ARCHITECTS' AND BUILDERS' INQUIRY BUREAU	442
THE BUILDING TRADE	443
SOME OBSERVATIONS ON WORKMEN'S COMPENSATION.—IX	443
DILAPIDATIONS AND WASTE.—IX	444
TIMBER STANDARDISATION IN AMERICA	445
NEW BUILDINGS IN LONDON	448
ISLE OF THANET BUILDERS' ASSOCIATION	449

ILLUSTRATIONS

New Maternity Hospital, Liverpool.

The new Maternity Hospital at the summit of Mount Pleasant, Liverpool, is now nearing completion and will be ready for occupation next month. This will be one of the first hospitals of its kind designed to embody all the essential requirements demanded by present-day maternity work. The scheme is the outcome of much research and thought and experience acquired by an active Building Committee and a Board of Lady Medical Practitioners. The policy of the hospital will be to attend to the welfare of mothers, before, during and after the birth of the child. Provision will be made for an improved education and training in midwifery, for doctors, midwives and nurses; a midwifery service available for all women; and an organisation of anti-natal supervision.

The administrative portion of the building will face the new 120 ft. wide road, now being constructed by the City Engineer, and the wards have been placed well away from the road on a quiet portion of the site. The wards also secure the benefit of sunshine during the greater part of the day. The hospital is self-contained and designed in several units, comprising administrative block, doctors' and nurses' quarters, wards, dual operating theatres, and out-patients' department, with every consideration given to the reduction of labour and cost of maintenance. Owing to lack of funds it has been possible only to erect half the hospital and provide fifty beds. It is, however, hoped that the money required to complete the whole scheme will be forthcoming. Major Gilbert Fraser, M.C., F.R.I.B.A., is the architect.

The general contractors are Messrs. Tysons (Contractors), Liverpool, and the following are the main sub-contractors:—Pearson Bros. & Campbell, Ltd., Liverpool (hollow concrete-block flooring); Maxwell & Fage, Liverpool (steel construction); W. & A. Piercy, Ltd., Liverpool (plumbing); The Art Pavements and Decorations, Ltd., London (terrazzo floors and wall surfaces); Musgraves, Ltd., Liverpool (sanitary goods); Wm. Griffith, Sons & Cromwell, Liverpool (heating, hot water and ventilation); The Express Lift Co., Liverpool (electric lifts); A. Griffiths & Co., Liverpool (electric light installation); Quiggin Bros., Liverpool (door and window furniture); Alexander & Fowler, Liverpool (sterilising plant). The Clerk of Works is Mr. F. Rudall.

Kelvin Hall, Glasgow.

This new building will occupy the same site as the previous hall, destroyed by fire some time ago. The main frontage to Argyle-street is 330 ft. in length, the main features being a piazza, flanked by two towers, and colonnades on either side terminated by smaller dome towers. The main hall is spanned by three arches, each 110 ft. wide and 460 ft. long, and one arch 60 ft. wide and 330 ft. long. These roofs are to be of ferro-concrete, the design of which is being carried out by the Considere Constructions, Ltd,. under the supervision of the City Engineer. The roofs are segmental in shape with a large continuous lantern 40 ft. wide, to lighten the interior.

Adequate cross ventilation will be obtained by the presence of windows in the external walls and dormer windows in the roofs. At the opposite end of the building from the main entrance there is a reception room, with platform, and a separate block for tea and luncheon room, with access from the hall. Completely detached from the main buildings are the stores buildings, three flats in height. Ample exit and entrance accommodation is a feature of the building. A Conference Hall is provided in the administrative block.

The administrative buildings will be in stone. The other walls will be built of brick with stone facings.

The design is by Mr. Thomas Somers, M.Inst.C.E., Master of Works and City Engineer, the plans having been prepared to his instructions by members of his architectural staff.

Leeds Improvement Scheme.

The Corporation of the City of Leeds at its meeting last week gave formal sanction to a design prepared by Sir Reginald Blomfield, R.A., for the elevations of buildings to be erected in streets in the centre of the city, where an improvement is being carried out approximately 1,000 yards in length and 80 ft. in width. All buildings, throughout the length of the improvement, erected on the side of the street which is being set back will be to the approved design in accordance with conditions on which the owners have either acquired land from the Corporation or have retained the portion of the estate they previously owned, not required for the widening of the street. As a result of this foresight the streets affected, throughout their length, will be of uniform architectural composition. When this street improvement is carried out, the Corporation will have gone far towards completing a series of street widenings and new streets in the centre of the city, on such lines that traffic will be able to avoid traversing streets where progress is hampered by the presence of tramways.

Silver End Garden Village.

We illustrate this week the lay-out of an interesting development which is proceeding at Silver End, a rural district midway between Witham and Braintree, Essex, where a complete self-contained garden village will be built. The Crittall Manufacturing Co., Ltd., the promoters of the scheme, are building a new factory in the position shown on the lay-out plan for the manufacture of fittings, etc., for their windows, which will continue to be made at their existing factories at Braintree and Witham. In order to provide homes for the workpeople employed, a company, called the Silver End Development Co., Ltd., has been formed, and will undertake the building and other development works by direct labour under the supervision of the architects and engineers. There is a fine grass meadow adjacent to the factory, and, as sports will be encouraged as a principal feature of the village life, this meadow is to be preserved as a recreation ground and a centre of attraction. A large building is to be placed on the western side of the ground, consisting of hall, canteen and club, and over the canteen will be placed a pavilion and dressing rooms for players. The village stores and bakery will be near this building, being but a short distance from the factory and in the centre of the development. About six hundred houses are shown on the lay-out plan, also a school, church and cottage hospital. There are small playgrounds for children dispersed about the village. Water will be supplied from a bore hole sunk on the site, and electricity generated in a power-house adjacent to the factory. The village will also have its own sewage disposal works. The existing Boarstye Farm is to be reconditioned and will become a model dairy. Messrs. Brown & Burgess, of Ipswich, are the architects for the factory. Mr. C. Murray Hennell, F.S.I., has prepared the lay-out illustrated, and he will share the design of the houses and other buildings with Mr. C. H. B. Quennell, F.R.I.B.A. Mr. James D. Haworth, M.S.E., is the engineer responsible for the water supply and drainage, and Mr. A. M. Sillar, M.Inst.C.E., will deal with the electric services.

The Plaza Theatre.

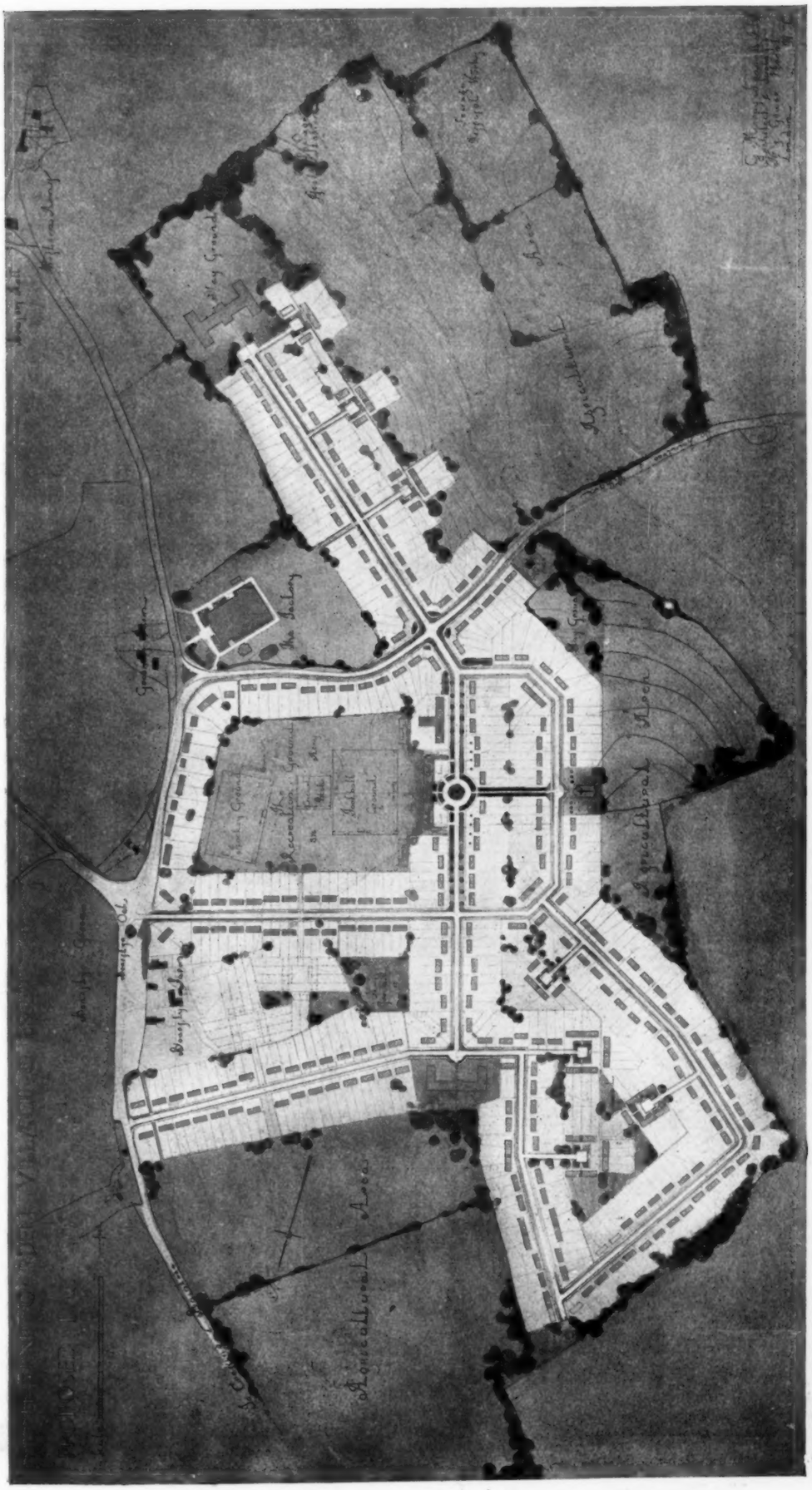
This theatre is situated at the junction of Lower Regent-street and Jermyn-street. The semi-circular main entrance is flanked by shops, and above it rises the cupola, decorated with waved bands of gold and blue. On the summit of this is mounted a representation of the Paramount trade mark cast in bronze. The entrance hall opens upon a foyer enriched with colour and furnished with old Italian lamps, furniture and paintings; a pair of antique columns, with their original gilding, add to the period character. The floor is covered by a 75 ft. carpet woven in the mediæval style. The grand staircase is reached via a marble floored landing, the pilasters of which are enriched by grape-vine ornamentation copied from the antique columns referred to.

The auditorium has a seating capacity of just over 2,000. The main floor is sunk below ground level, and above this is the Royal Circle, an enclosure on the foyer level, providing accommodation for about 80 persons, who are invisible except from the stage. Above this is the grand circle. Perfect sight lines to the screen are obtained from every seat. The ceiling lighting is diffused from amber-coloured matt glass panels set in light metal frames in the ceiling. The side walls up to the proscenium comprise two high arches, in one of which the organ is built, the other serving as an exit. The organ console is detachable, and is taken up and down in a lift to the organ loft when required, accompanied by the organist. The proscenium arch is enriched in fruit and flower design, and the safety curtain is a reproduction of an Italian Renaissance hunting scene. The entrance, grand foyer, orchestra stall foyer, corridors and staircases have all been simply decorated and the ceilings are enriched with a banded treatment. As regards heating and ventilation, two large steam boilers 41 ft. below ground level generate all the steam required to supply the warm air batteries. A spray type air washer has been installed to cleanse the air delivered into the building. The mechanical extraction is arranged within the ceiling decorations in the parterre, foyer loge, and auditorium ceilings. The operating enclosure is situated at the top of the grand circle.

The general contractors were Messrs. A. Vigor, Ltd., and the following were sub-contractors:—G. Jackson & Son, Ltd. (fibrous plaster, decorative woodwork, grilles, mirror frames, &c.), Waring & Gillow, Ltd. (carpets, tapestries, draperies, tableau curtains, &c.), F. H. Pride (bronze brackets to canopy, amber glass auditorium ceiling panels), Young, Austen & Young (heating and ventilating), Wurlitzer Hope Jones (organ), General Electric Co., Ltd. (house and stage lighting), Tredegars (1923), Ltd. (electrical contractors), T. Starkie Gardner, Ltd. (art metal work), Sturtevant Engineering Co., Ltd. (vacuum cleaning plant), Etchells, Congdon & Muir (passenger and organ lifts), Frank Burkett (fire curtains), T. Frank Brockliss, Ltd. (Simplex projectors), Metropolitan Vickers Electrical Co., Ltd. (generators), Taylor, Taylor & Hobson, Ltd. (lenses), Walpamur Co., Ltd. (water paint), Joseph Chater & Sons (fire-resisting glazing).

London School of Hygiene and Tropical Medicine.

We are asked to make it clear that the design for the new London School of Hygiene and Tropical Medicine, by Messrs. A. W. S. & Kenneth M. B. Cross, illustrated in our last issue, is not the one which is to be carried out. The selected design, as our readers are aware, is by Mr. P. Morley Horder, F.R.I.B.A.



Lay-out Plan, Silver End Garden Village, Essex.

Mr. C. Murray Hennell, F.S.I., Architect.

UNIV OF MICH

The Plaza Theatre, Lower Regent-street, W.: General View of Exterior.

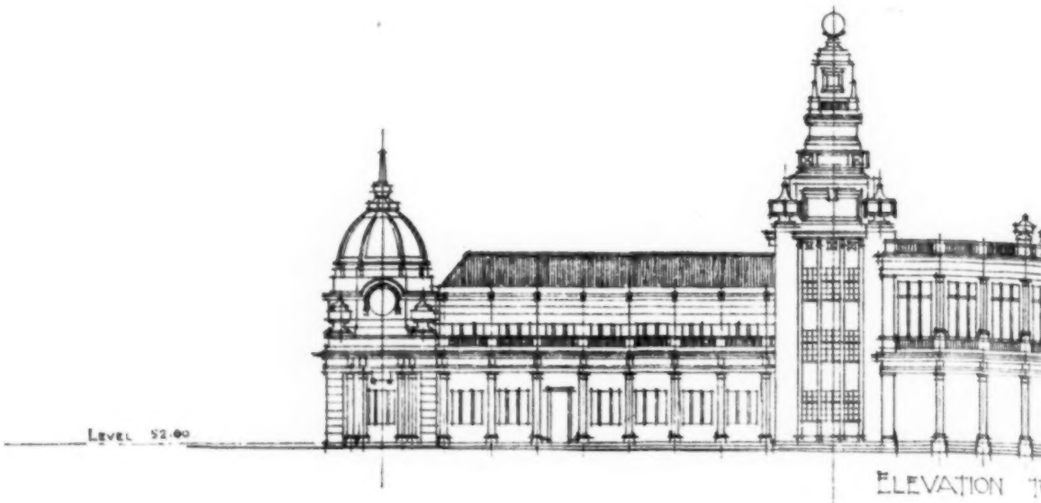
MR. FRANK T. VERITY, F.R.I.B.A., Architect.

The Plaza Theatre, Lower Regent-street, W.: General View of Auditorium.

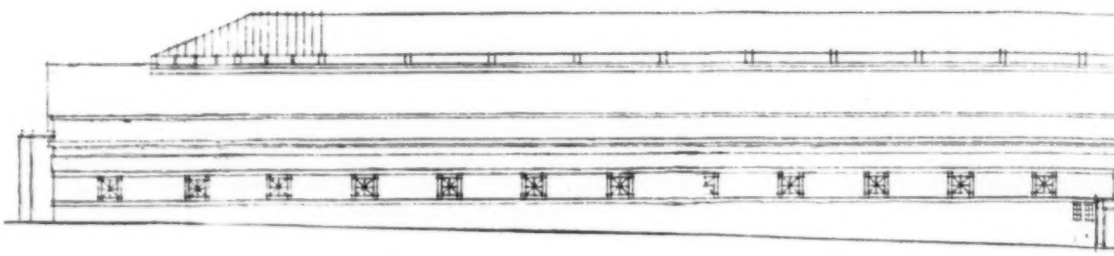
Mr. Frank T. Verity, F.R.I.B.A., Architect.

CITY OF DETROIT

Mr. Frank T. Verity, F.R.I.B.A., Architect.

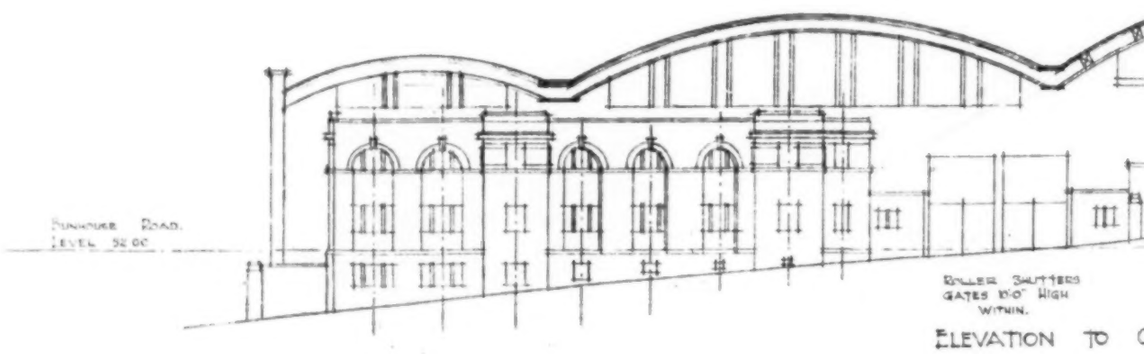


ELEVATION T

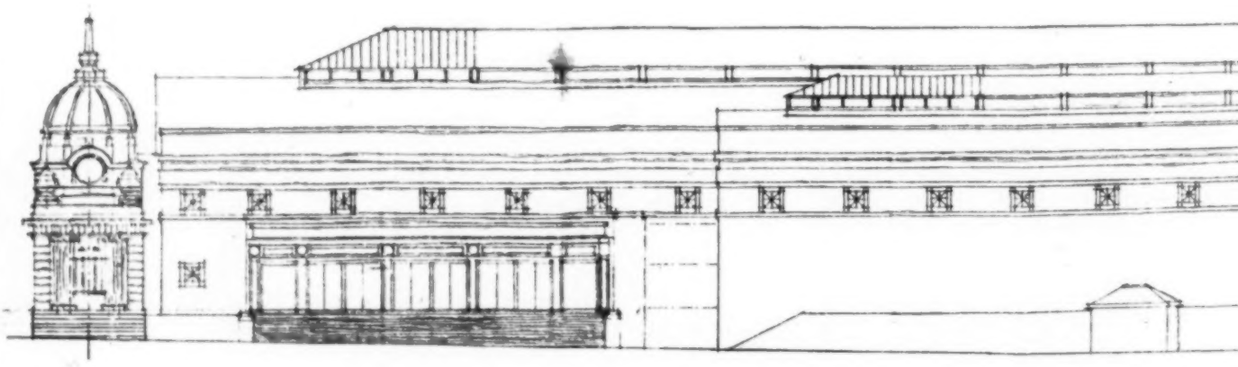


LEVEL 52.00

ELEVATION T



ELEVATION TO

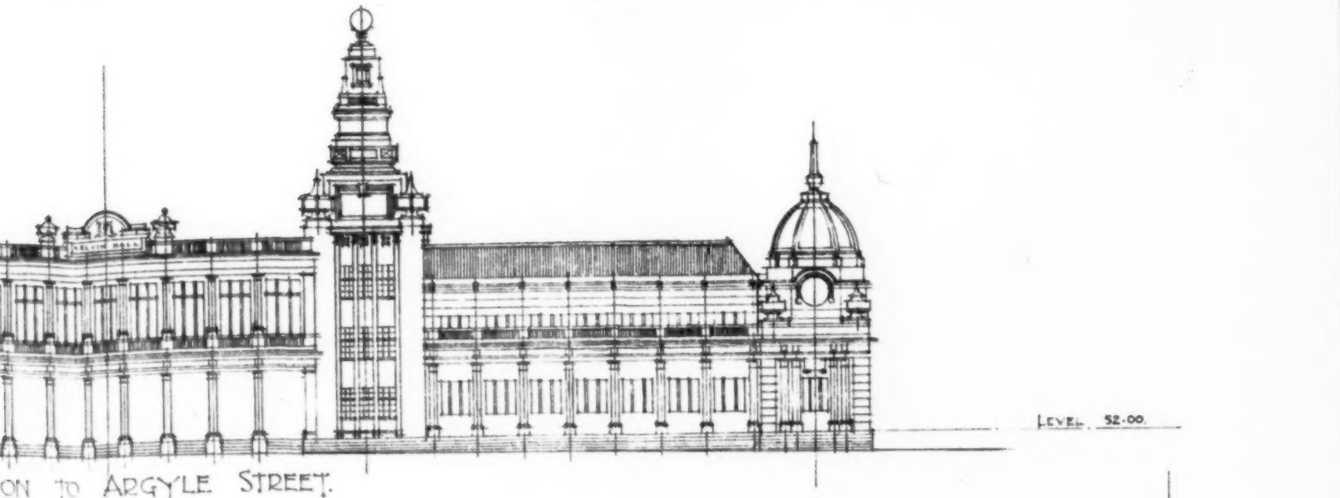


SCALE OF

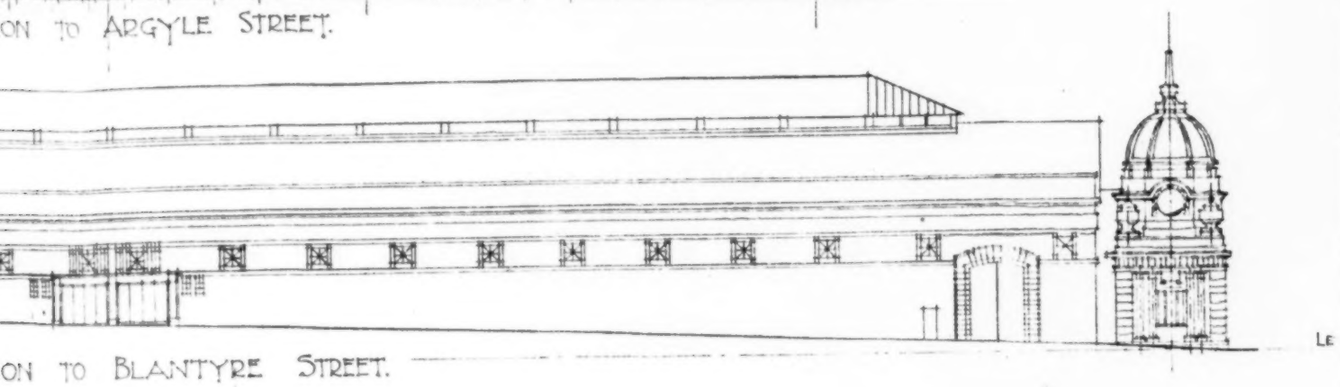
UNIV. OF MICH.

PROPOSED NEW KEL

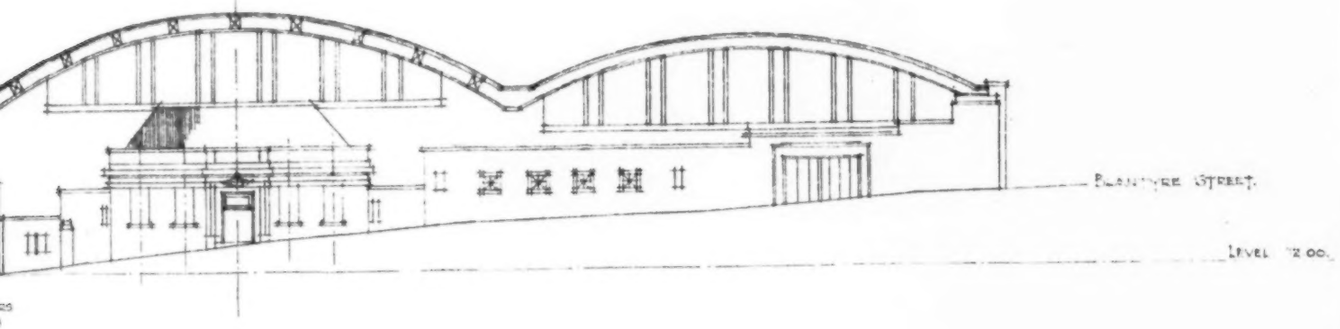
MR. THOMAS SOMERS, M.INST.C.E., M



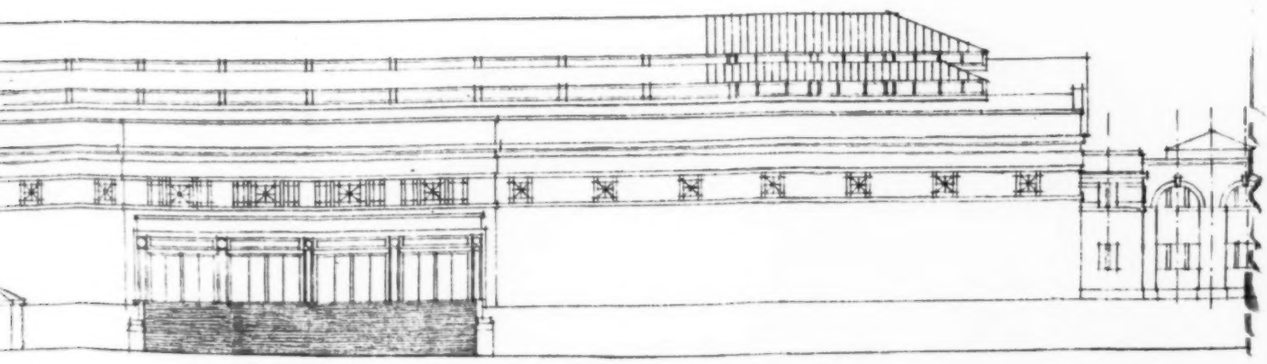
ON TO ARGYLE STREET.



ON TO BLANTYRE STREET.



TO OLD DUMBARTON ROAD.

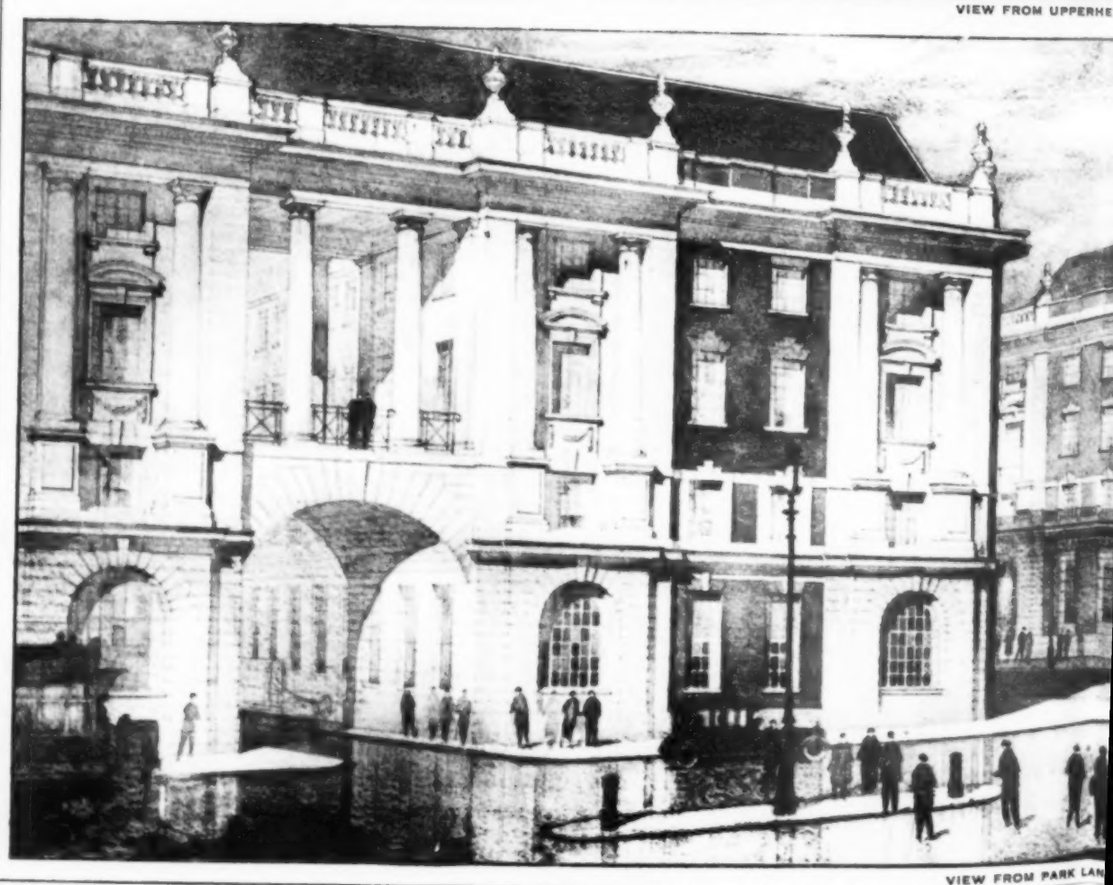


ELEVATION TO BUNHOUSE ROAD.

NEW KELVIN HALL, GLASGOW.

INST.C.E., MASTER OF WORKS AND CITY ENGINEER.

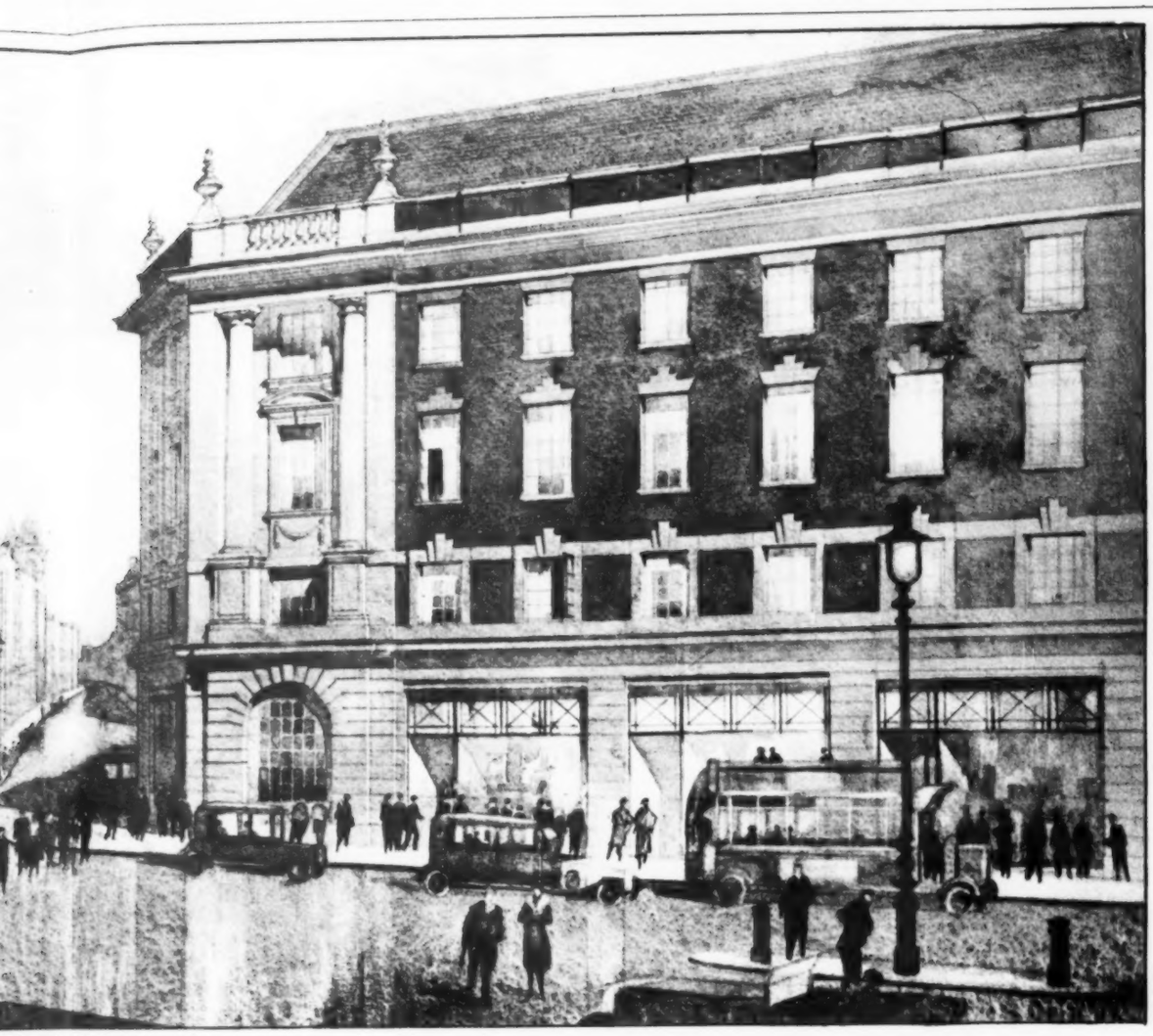
VIEW FROM UPPERHE



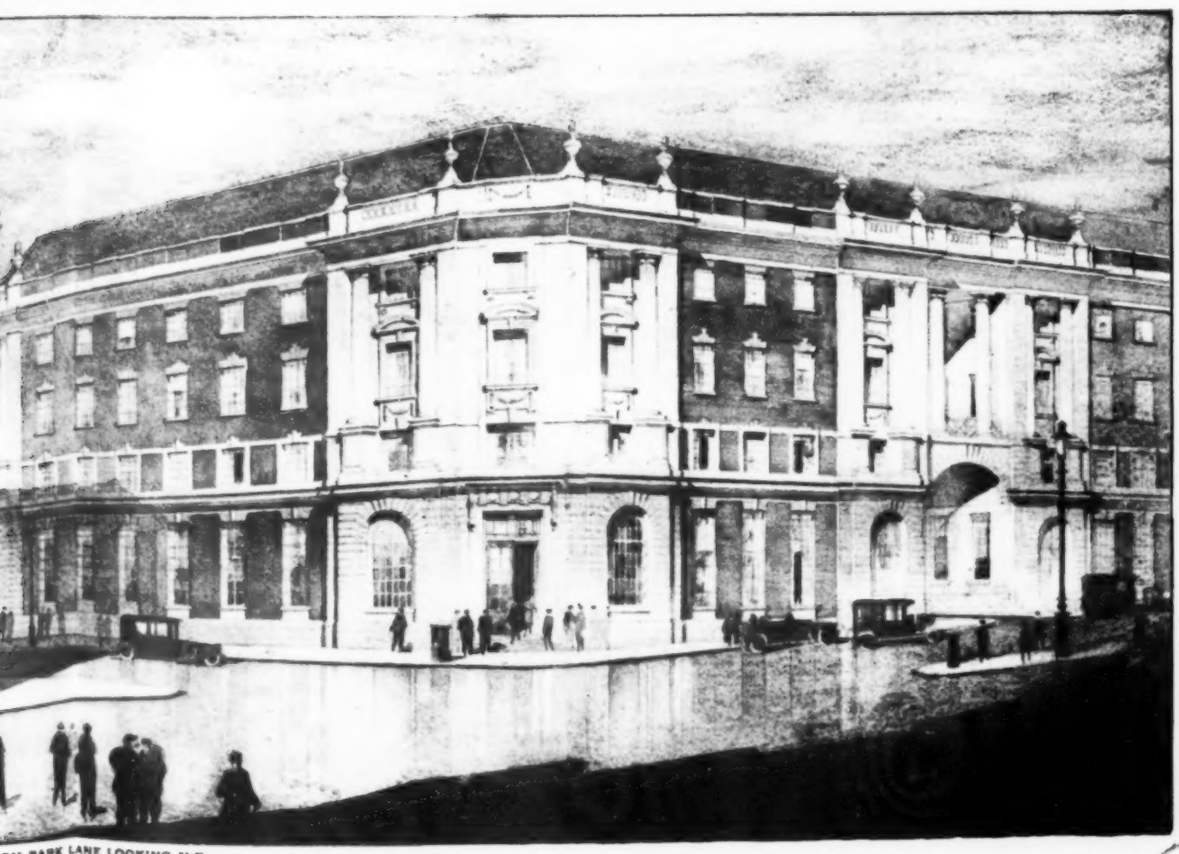
VIEW FROM PARK LAN

CITY OF LEEDS IMPROVEMENT SCHEME: APPROVED

BY SIR REGINALD BL



M UPPERHEAD ROW LOOKING N.W.



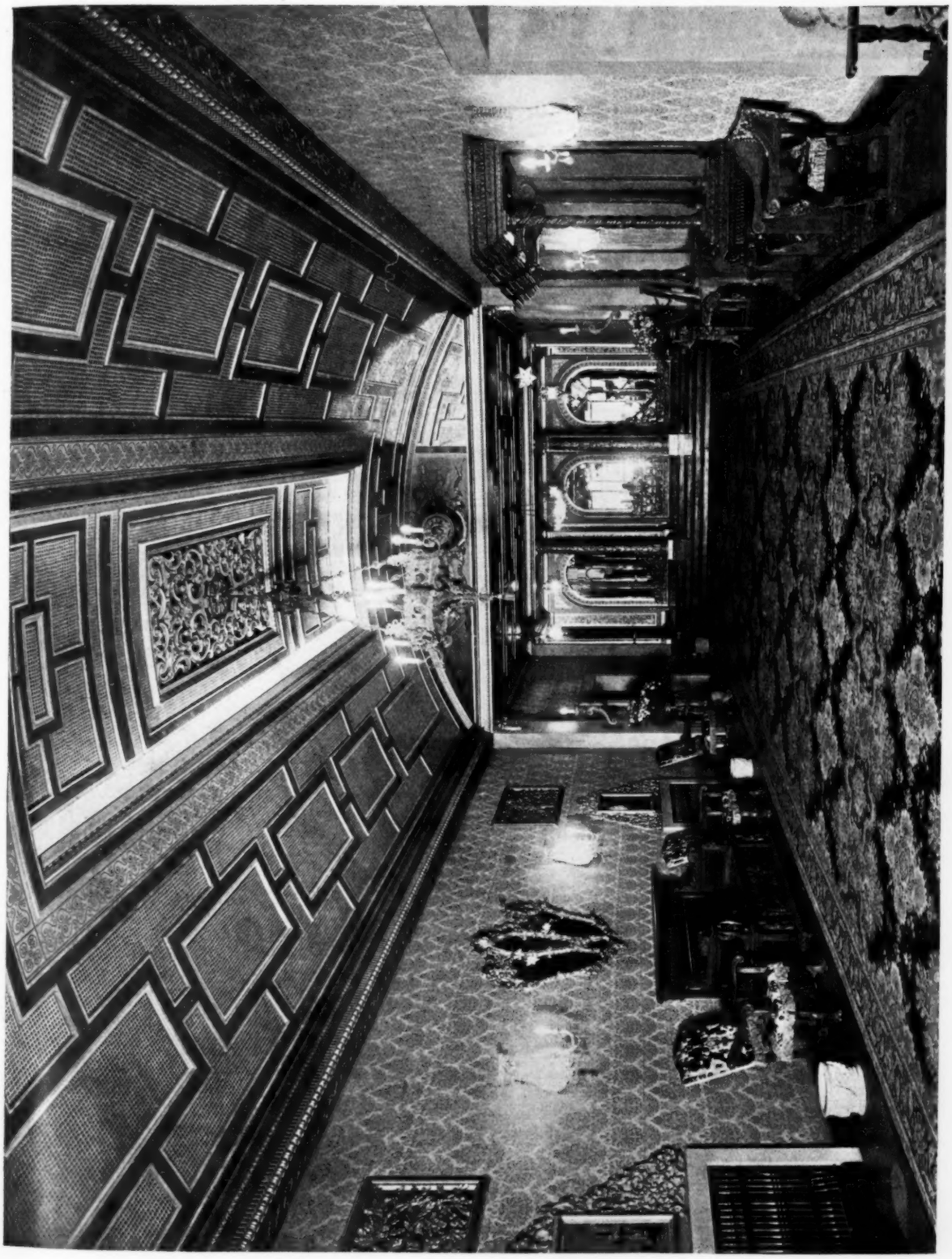
OM PARK LANE LOOKING N.E.

APPROVED DESIGN FOR EAST AND WEST STREET

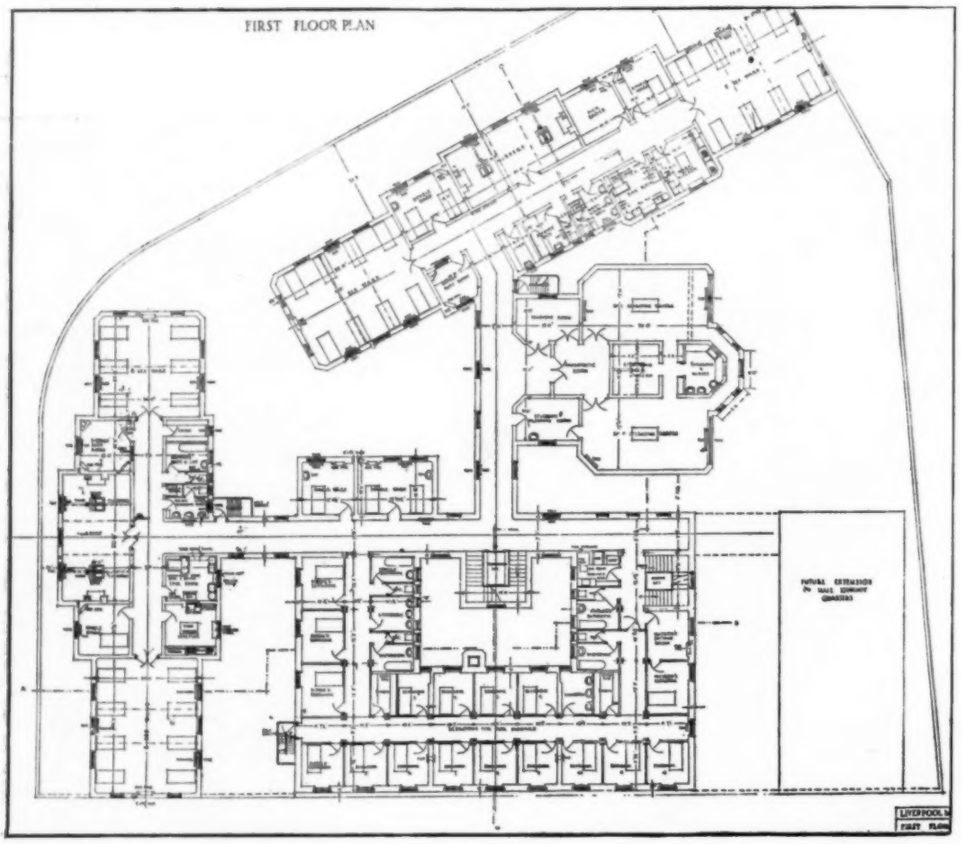
REGINALD BLOMFIELD, R.A.

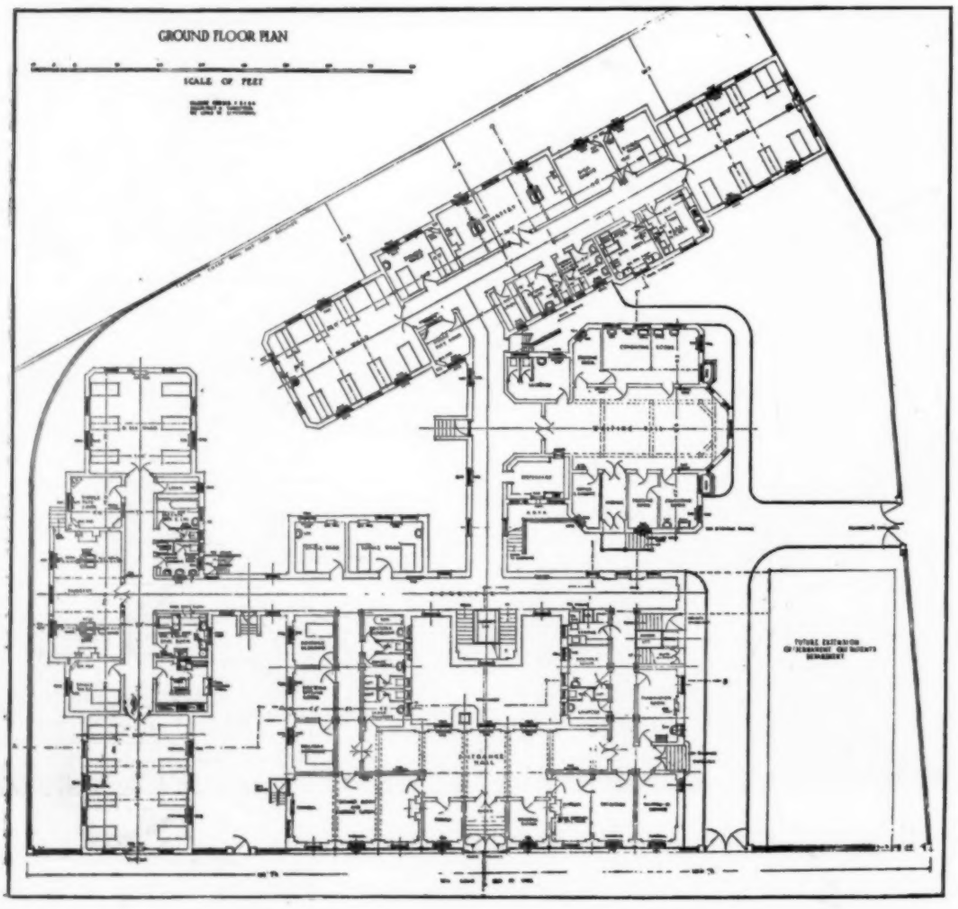
The Plaza Theatre, Lower Regent-street, W.: Proscenium.

Mr. Frank T. Verity, F.R.I.B.A., Architect.



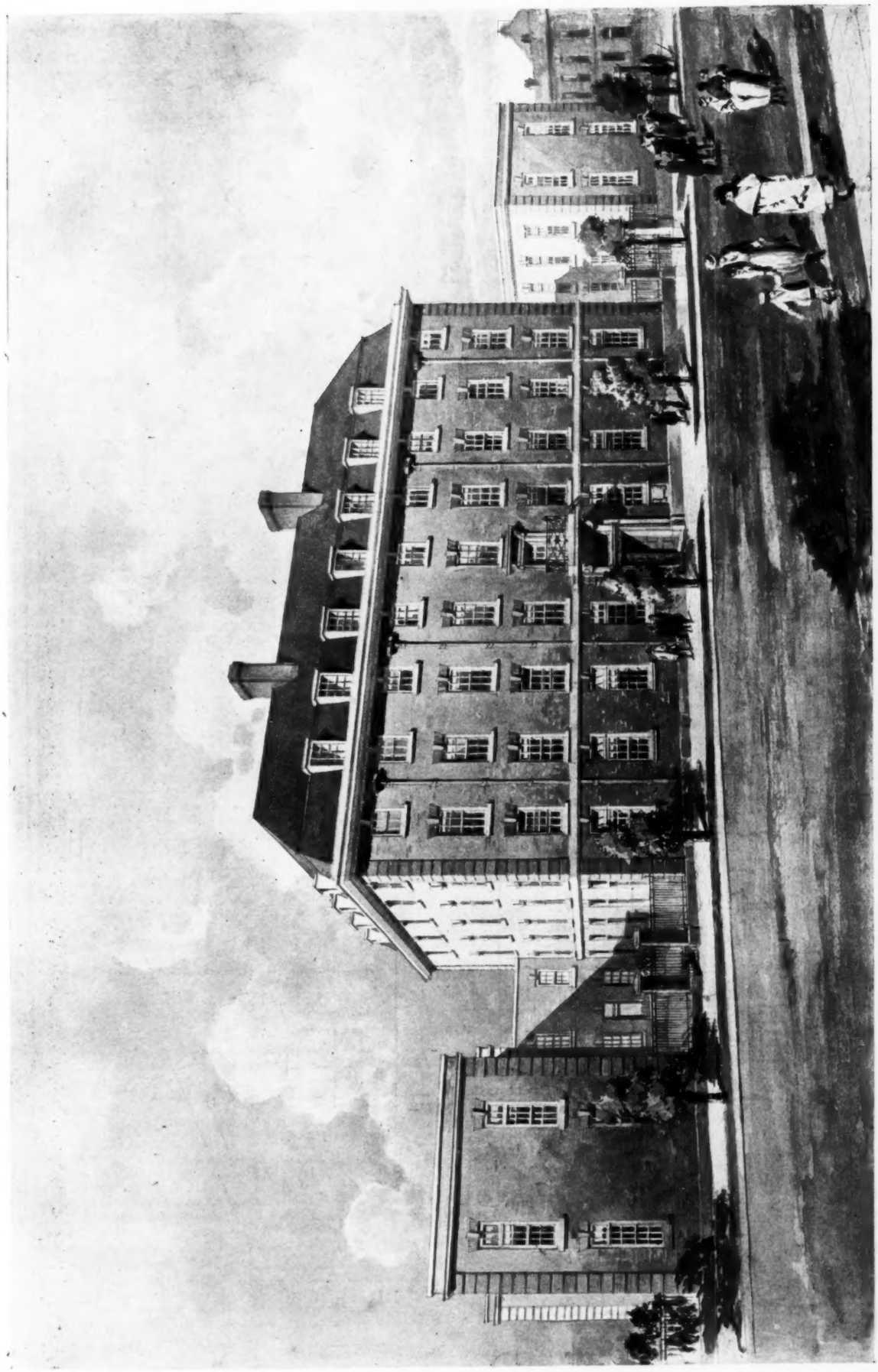
The Plaza Theatre, Lower Regent-street, W.: Grand Foyer.
Mr. Frank T. Verity, F.R.I.B.A., Architect.



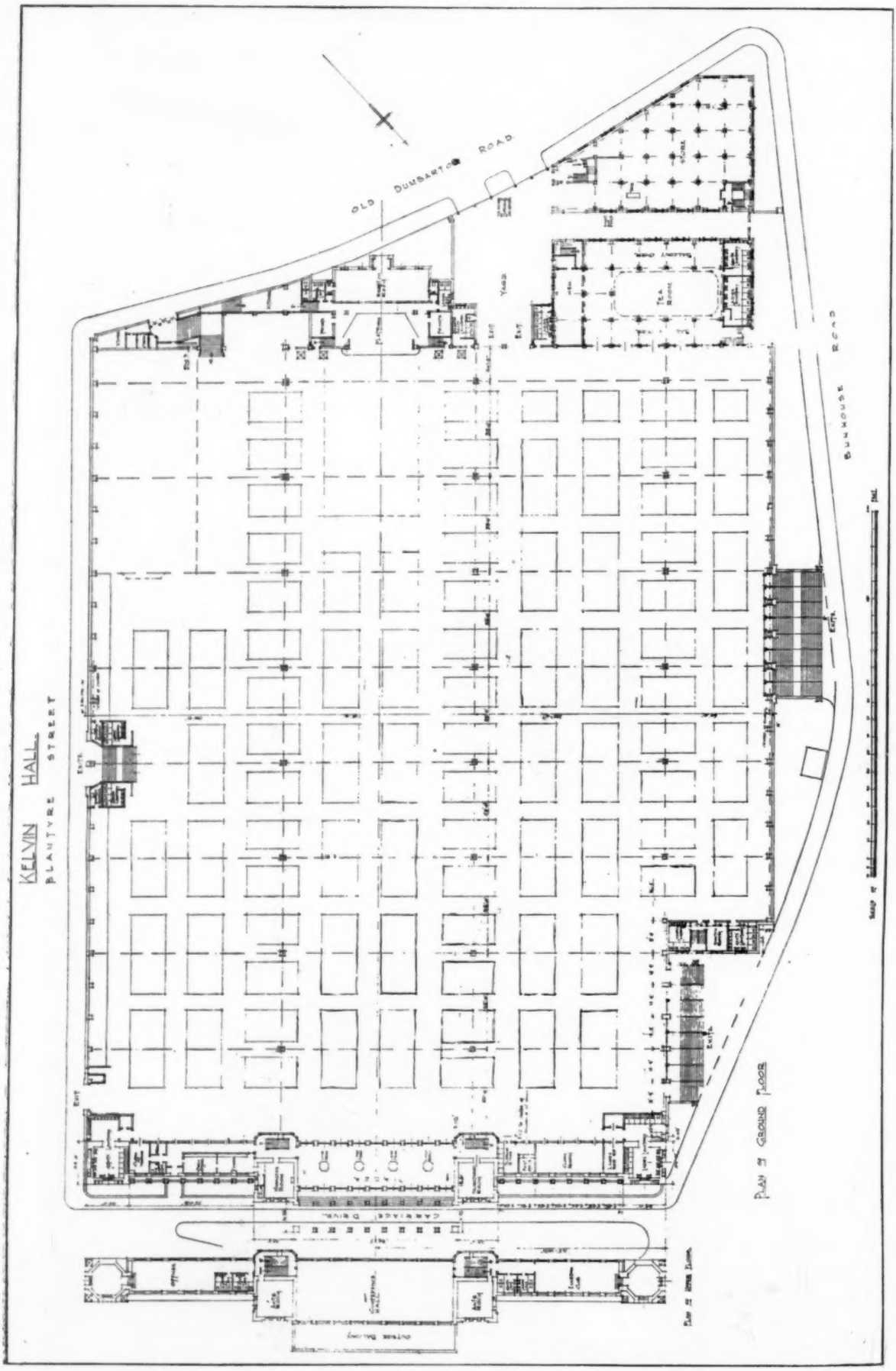


Liverpool Maternity Hospital: Ground- and First-floor Plans.

Mr. Gilbert Fraser, F.R.I.B.A., Architect.



Liverpool Maternity Hospital. Mr. Gilbert Fraser, F.R.I.B.A., Architect.



Plan of Proposed New Kelvin Hall, Glasgow.

Mr. Thomas Somers, M.Inst.C.E., Master of Works and City Engineer.

DOMESTIC HEATING

IN a lecture on this subject, given before the Royal Society of Arts recently, Miss Margaret Fishenden, D.Sc. (Fuel Research Division, Department of Scientific and Industrial Research), surveyed the history of domestic heating from the earliest times, tracing the development of methods, fuels and apparatus up to the present day, and giving valuable particulars of heating values, together with economic comparisons scientifically ascertained. Coming to the consideration of modern methods, the lecturer said that convection heating, with no primary radiation, could be obtained by the introduction of pre-heated air into rooms. The most familiar example, however, although in this case accompanied by a small proportion of radiation, was afforded by the usual system of central heating in which so-called radiators, consisting of groups of interconnected cast-iron columns through which hot water from a central boiler circulates, were installed in the rooms and corridors of a house. For central heating, no fuel could compete with coke in economy, whatever the basis of comparison. Small coke-fired boilers, such as are used for small-scale radiator installations, gave an efficiency of about 50 per cent. in water heating; in addition convection from the exterior stove surfaces might be usefully employed if the warm air had access to the building. In such boilers, neither coal nor anthracite could do much better than coke, and either was dearer per therm. Gas, for air heating, whether through the medium of radiators or stoves, or directly from open flames, gave efficiencies of 80 to nearly 100 per cent., the former figure applying to small gas boilers, the latter to flueless gas heaters of any type. Electrical methods also gave practically 100 per cent. The prices of equivalent numbers of heat units in coal, coke, gas or electricity were in the ratio of 1 : 0.9 : 5.3 : 31. Assuming 100 per cent. efficiency for gas or electricity, and only 50 per cent. for coal or coke, the cost to produce any given effect became 1 : 0.9 : 2.6 : 15.5. Or, in other words, gas was nearly two-and-a-half times, electricity fifteen-and-a-half times, as expensive as coal, while coke cost rather less than coal.

A very interesting example of house warming by the agency of direct radiation was to be found in the system known as "panel heating," which at the present time showed some signs of development. The method depended essentially upon the maintenance of a relatively large patch, such as a ceiling or wall, at a temperature (say, 80 deg. F. to 120 deg. F.) not greatly in excess of that of the remainder of the room, by the circulation of hot water through pipes buried in the plaster. When the ceiling was chosen as the heating surface, convection currents were largely checked, for the warmed air was already at the highest level attainable in the room, and could rise only through accidental cracks and crevices. The heating effect was thus occasioned in the first instance almost entirely by non-visible thermal radiation; but this was subsequently absorbed by the contents of the room, and air heating ensued. When a wall was chosen as the heating surface, direct convection effects were added to the effects of radiation. Panel heating had been applied to a number of large buildings, both in London and elsewhere, and was claimed, probably not without foundation, to be both cheap and extremely comfortable. The speaker had found, by direct experiment, that a mean horizontal component of thermal radiation, approximately equivalent to about 30 B.Th.U. per square foot per hour across the position of occupants, was enough to sustain warmth indefinitely in a room at 60 deg. F.; while in a room at 50 deg. F. 120 B.Th.U. per square foot per hour was required.

The most familiar form of the small-area, high temperature heating appliance was the ordinary open coal fire. This depended primarily upon the emission of radiant energy, partly because the incandescent fuel reached very high temperatures and partly because the heated air which rose from it was carried away up the chimney flue with the products of combustion of the coal, and so failed to be utilised in the room. Further losses of heat were caused by incomplete combustion and conduction through the flue and grate walls, with the result that the quantity of energy which found its way into the room did not usually exceed some 20 to 25 per cent. of the total theoretical energy of combustion of the coal, or perhaps 25 to 30 per cent. when good quality coke was used. The radiation efficiency of commercial grates burning coal generally lay between 15 and 25 per cent. though deeply recessed dog grates with low overhanging canopies and high kerbs, or grates which are very wide from back to front, might give lower values. In addition, there was a gradual creep of heat from the hot flue through the wall into the room, but this did not generally amount to more than a very small percentage of the heat of the coal used. Up-to-date gas fires, on the other hand, gave thermal radiation into a room equivalent to as much as 50 per cent., or more, of the theoretical heat of the gas used, and a total efficiency of perhaps 55 per cent. Electrical heaters gave nearly 100 per cent. efficiency, the proportion of radiation depending upon the type, but rising to 70 per cent. or more in some cases, while the remainder of the available energy was spent directly in air heating.

Taking these figures, it might easily be calculated that on the basis of equal heat production in a room, gas fires were about twice as dear and electric heaters about seven times as dear as coal fires. Coke is slightly cheaper than coal, say about three-quarters the cost. Thus the cost of gas was again very high, while that of electricity was quite prohibitive, in relation to that of coal. There were, however, many cases in which this unfavourable comparison was considerably modified, since it was not for continuous heating that gas or electricity showed to advantage. For intermittent heating, the fact that either could be turned on or off at will resulted in a substantial reduction in the amount of heat required as compared with that necessary from a continuously burning coal or coke fire. Let us suppose, for instance, that a room—a dining-room, say—was used intermittently for a total of four hours a day. Assuming that a gas fire or electric radiator would be kept in action only for the net periods during which the room was occupied, and disregarding the fact that when the heating was discontinuous the temperatures attained in the room would be lower than when a fire was kept burning all the time, the cost of gas or electricity might be taken as proportional to the aggregate period of use. If, to meet the needs of the case, a coal fire must be maintained for 16 hours a day, even though the rate of combustion were cut down to one-half when the room was unoccupied, a demand equivalent to a full rate over ten hours would have to be met. On the other hand, gas or electric heating would extend only over the four hours of actual occupation. Thus, the cost of gas would be reduced to about 0.8 times the cost of coal, or about the same as that of coke; while electricity would cost about three times as much as coal. Moreover, electric heaters were portable, and the fact that they could be placed in any convenient position often enabled them to keep the occupants of a room comfortable by the emission of less radiant energy than would be required from a more distant coal fire. Since the use of solid fuel involved a great deal of work, both directly in the laying of fires, carrying of coal, cleaning of grates, and sweeping of chimneys; and indirectly through the effects of dirt, gas fires for periodic heating totalling only a few hours a day generally proved in practice decidedly cheaper than coal or coke fires. And even electric heaters, by their convenience and adaptability, sometimes repaid for the higher cost of the units used. Where energy could be obtained for less than 1d. per unit, electricity might be regarded as a serious rival of coal for intermittent heating.

Since the thermal efficiency of the making of gas from coal was about 50 per cent., and the resulting gas could be utilised in an open fire with more than twice the efficiency of coal in an open grate, from the aspect of coal conservation gas fires compared satisfactorily with open coal fires even for continuous heating. For intermittent use their substitution would be accompanied by a great saving of our natural fuel supplies. The high efficiency in use of electric heaters again failed to compensate for the low thermal efficiency of generation, and for continuous heating their use in place of open grates would result in nearly twice as much coal being used at the power station as would suffice if burned directly in a room. If only required for a few odd hours, however, the position might become so far modified as to allow of a slight reduction in effective coal consumption.

Since open coal or coke fires burn up slowly, the radiation emitted was low in the period immediately following lighting. This was a serious defect, for, while the rise of temperature in the room was consequently very gradual, it was precisely in the initial stages, when the room was still cold, that most radiation was needed for comfort. In this respect, gas fires or electric heaters score, for they could be turned on at full rate while the room was cold, and subsequently reduced; on the other hand, the fact that they were in use only intermittently caused the initial temperature to be lower than when coal fires were used, and for this reason in very cold weather the temperature of the walls might get so low that a scorching radiation was needed to counterbalance their effect. As a rule, if one could conveniently get within 5 or 10 ft. of a coal fire burning 2 lb., a gas fire burning 30 cu. ft., or a high temperature electric radiator taking 2 kilowatts per hour, room temperatures of 55 deg. F. to 60 deg. F. would suffice for sedentary occupation. At greater distances very large fires would be required unless some means of warming the air were available separately; and then another trouble arose, for too near the fire it became uncomfortably warm.

So far as health is concerned, there were probably real grounds for our national love of the coal fire, which in many ways was a form of heating well adapted to the prevailing climate. The non-uniformity of its effect, although usually accounted a disadvantage, might well actually be stimulating physiologically, and the high rate of ventilation induced was probably also hygienically good. The winter temperatures in this country did not fall so low as to render direct air heating really necessary, though the ideal equipment doubtless included some form of radiators to be used in conjunction with air heating in very cold weather, or alone during in-between seasons.

Economy, said the speaker, was generally a primary consideration, and the most suitable method of heating to be adopted in any case depended essentially upon the requirements, and was related both to the size of a room and the number of its occupants. As had already been pointed out, where convection heating was used, the whole of a room must be warmed, however large it might be, or whatever the number of its occupants; while with radiation heating, people could gather around the fire, whatever the size of the room. Consequently, for continuous heating in small rooms, air heating was generally the cheapest method, but as the size of the room increased, open coal or coke fires became cheaper, especially if there were only a few people present. But for very large rooms, open fires alone became quite impracticable, and some form of air heating must be fallen back upon; it would be interesting to see whether panel heating was found suitable for such requirements.

THE "BUILDER" CONSTRUCTIONAL PROBLEM COMPETITION

THIS Competition is limited to students in architecture and building classes or schools, assistants who have not passed the Final of R.I.B.A., and others engaged in architecture or building not over 25 years of age. A prize of £1 will be awarded each week.

Drawings to be on paper, tracing paper, or linen not exceeding 30 in. by 22 in. (Imperial size), and should be in ink, with bold lines and printing, as the drawings, if reproduced, are much reduced in size. The drawings can be sent folded in a large envelope or rolled. Competitors must put their name and address on each drawing. Those who wish to have their drawings, &c., returned must enclose a stamped and addressed adhesive label.

Answers, addressed to the Editor and marked "Problem 10," to be sent in not later than first post, March 22. The Editor's decision to be final.

PROBLEM 10.

The problem this week is the drainage of a country house. Upon the block plan is shown the soil and other pipes. The rain-water to the south side can be conveyed to an underground storage tank, and the remaining R.W.P.s can be connected to the soil drain, which is to discharge into a cesspool or sewer on the north side. Details of storage tank, cesspool, or connection to sewer are not required. Draw to a scale of 8 ft. to an inch a plan of the drainage and details of two inspection chambers—one with the general drainage, and the second next the cesspool or sewer, showing the intercepting trap, &c.

PROBLEM 7.

The designs submitted in this Competition by the competitors were in many cases very good, and some difficulty was experienced in selecting the winner. The prize of £1 has been awarded to Mr. M. Cormie, of Annan, Dumfriesshire. Mr. Cormie's design, whilst perhaps not so artistic as some that were submitted, was more fully detailed, as will be seen from the drawing reproduced. In the detail of wood archway the curved member at A should die into the vertical member. The angle-bar at B is not correct, and the mould to the door transom should be grooved in; otherwise the construction is generally sound.

The winner gives the following particulars of construction: "The shop front, including pilasters, fascia, doorway, and screen to be executed in teak, oak, or redwood, with granite base and step. A portion of step will be sunk in to receive mat. The portion of shop windows above transom to be glazed with leaded lights and the bottom part glazed with plate-glass. Immediately in front of doorway, above transom, will be a semi-circular archway, with mullions fixed between same and top sash. Provision will be made for condensation in the form of a groove and tubular hole in bottom sash. The sliding screen at back of window has oak stop beads fixed in sashes and will slide on ball-bearing runners. There will be two 10 in. by 6 in. R.S.J.s, with padstone above, to carry 14 in. wall. Floor joists to rest on lower flange of inner R.S.J. The sign to be in wood letters fixed to frieze-board."

Mr. E. B. Tyler sends a good design in bronze, but the details are very sparse. The ventilation, by means of a grille in the soffit of the vestibule and fanlight over the door, is quite good. The sides being open, the windows are also ventilated.

Mr. R. A. Phillips submits a good design, but he also lacks details; otherwise he would have stood a good chance of winning.

Mr. S. D. Bowman's design is simple and dignified with a black marble base, but his details would not be sufficient for a working drawing.

Mr. H. R. Hudson sends a design in which the window on either side of the door slopes away from same and makes a recess next to the party wall. Leaded lights in the form of a spider's web are placed in the upper portion, but the effect is not happy.

Mr. G. F. Lawson submits a good design, but the details are insufficient. Mr. G. W. Salt is another whose design is in bronze, and would make a very pleasing front if carried out.

Generally, the designs are quite good; some, in fact, excellent; but, with the exception of the winner, no one has fully detailed the work. Competitors should bear in mind that the object of these competitions is to help the student in construction, and the design is of secondary importance. Competitors would gain much information if they would first work out the problem as they think it should be done, then look up some good work of reference upon the subject, and, finally (and this is most important), go out and examine some actual examples of executed work. By these means a lasting and practical training will be obtained.

SURVEYORS' INSTITUTION ANNUAL DINNER

THE Annual Dinner of the Surveyors' Institution was held in the Connaught Rooms, Great Queen-street, Kingsway, on Tuesday evening last, when the President, Mr. John D. Wallis, occupied the Chair. Among those present were the following:—

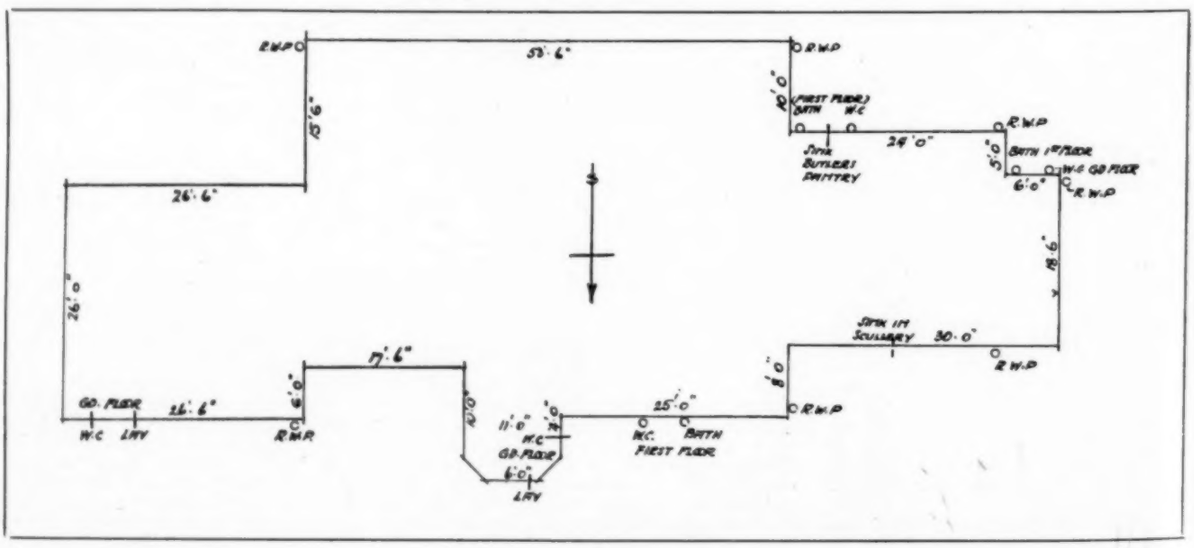
The Earl of Crawford and Balcarres, K.T., Mr. Dendy Watney, The Earl of Onslow, Sir John Oakley, Lord Bledisloe, K.B.E., Sir Archibald Weigall, K.C.M.G., Sir Edwin Savill, O.B.E., Sir Arthur Robinson, K.C.B., Mr. E. Guy Dawber, F.S.A., Mr. J. M. Clark, Mr. Ralph H. Brady, Sir Christopher Needham, Sir H. Courthope Munroe, K.C., Mr. C. H. Bedells, Mr. Edward Willis, Lord Blanesborough, Mr. Arthur Vernon, Lord Hewart, Mr. Leslie Vigers, Sir H. Kingsley Wood, M.P., Mr. John Willmot, Mr. W. Edgar Horne, The Lord Mayor of Manchester (Alderman M. E. Mitchell), Mr. C. B. Fisher, C.B.E., Sir Herbert Gibson, Bart., Mr. W. G. S. Rolleston, Sir Howard Frank, Bart., G.B.E., Mr. E. M. Konstam, C.B.E., K.C., Mr. F. Hunt, C.V.O., Mr. Harold Swan, Sir Henry Tanner, Mr. William Woodward, Major Harry Barnes, Mr. G. L. Pepler, Mr. Ian MacAlister, and many others.

After the customary loyal toasts had been honoured,

Mr. C. Gerard Eve, proposing the toast of "His Majesty's Ministers," referred to the great amount of legislation with which surveyors had to be familiar, and said it was necessary for surveyors who would keep abreast of the times to possess a Statute book. There was a danger, he continued, of agriculture losing its position of a primary industry and of taxation taking its place. Over one hundred thousand millions had to be provided by taxation and rating.

The Right Hon. Lord Bledisloe, K.B.E., P.C. (Parliamentary Secretary, Ministry of Agriculture), replying, said he was not unmindful of the valuable advice which the Surveyors' Institution had given his department, whose policy included agricultural credits, a system of drainage of agricultural land, the marking of imported produce, the introduction in this country of the cash-on-delivery system, the further development of the beet sugar industry, the easing of the heavy rating burden, assistance for roads, the reconditioning of old cottages instead of their demolition, and the development of co-operation among the agricultural community.

Sir H. Kingsley Wood (Parliamentary Secretary, Ministry of Health) also replied, and referring to the Rating and Valuation Act, produced last year, said he thought that Institution more than any other body would reap the

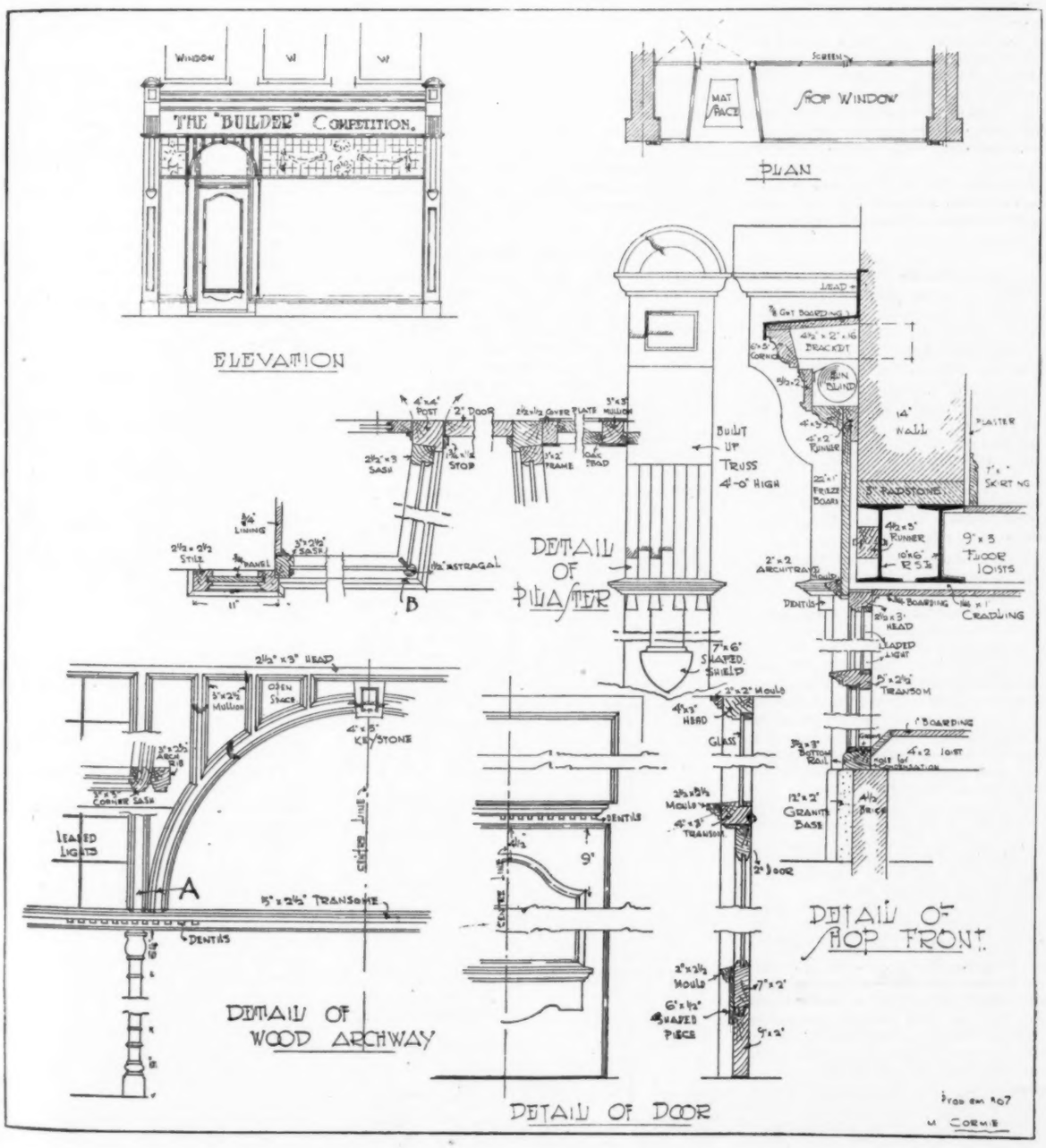


Problem 10.

benefit of that Act of Parliament. In connection with the housing schemes, he was glad to acknowledge that he had had the greatest assistance from the surveyors. Last year nearly 160,000 new houses had been built—a record for this country—the great majority being by private enterprise. It was the aim and ambition of Mr. Neville Chamberlain and himself to encourage private enterprise. They were also doing what they could to encourage the owner-occupier. During the last few years the State had advanced twenty-three millions of money to enable people to own their houses, and the building societies had done even more.

The Right Hon. Lord Hewart, P.C. (Lord Chief Justice), proposing the toast of "The Surveyors' Institution," said he felt as though he were surrounded by an army of expert witnesses. Proceeding to remind his hearers of "one or two matters with which they were perfectly familiar," his Lordship said that when the Surveyors' Institution was formed in 1868, the membership was 200; to-day it was 6,000. The policy of the Institution had been continually to raise the standard of a great profession and to secure that no man in this country should become a surveyor without a real grounding in those matters of knowledge and experience essential to competent professional practice. The Institution was not, however, content with being merely an examining body; it gave its services to Royal Commissions, Departmental Committees, and on all questions of land its authority was recognised. Referring to the Acquisition of Land Act, his Lordship said he could look back upon this measure with a certain amount of paternal pride. He believed that the Acquisition of Land Act had proved a great benefit to every public authority which might be required to purchase land, and it appeared to him that that great Institution had never been more prosperous than since the passing of that measure. He was glad, he continued, to renew acquaintance with his old friend, Mr. John D. Wallis, who had given up his position of Official Arbitrator in order to become their President. He (the speaker) had found himself with and against Mr. Wallis in many a hard-fought case, and he confessed that he always preferred to be with him.

The President, replying, said he felt it a great privilege to be in that chair as their President. He thanked Lord Hewart for the kind reference to himself, and would say that members of his (the speaker's) profession always regarded it as a privilege to come into contact with the great minds and acute brains of the leader of the Bar. The success of the Surveyors' Institution, he continued, was due in large measure to the men who founded it nearly sixty years ago—men of far-seeing and of high ideals. They lay down three main objects: (1) A high standard of professional training; (2) the raising of the status of the profession; and (3) a high standard of professional conduct. There was a responsibility on them, their successors, to maintain the traditions of those who had gone before. The speaker stressed the desirability of members describing themselves as "Chartered Surveyors," as a guarantee to the public of proficiency in technical knowledge and skill. Paying a tribute to the staff of the Institution, the President mentioned in particular the work of Mr. Norman Garrard, the Hon. Secretary, and of Mr. Alexander Goddard, Secretary, who had given twenty-one years of devoted service to the Institution. Mr. C. J. Howell Thomas, C.M.G., proposed the toast of "The Guests," and the Right Hon. the Earl of Crawford and Balcarres replied.



Winning Design, Problem 7. BY MR. M. CORMIE. (*See p.* 438.)

SPECIFICATIONS.—IX

By H. V. MILNES EMERSON, A.R.I.B.A.

CARPENTER AND JOINER—(*Continued*).

178. Flats.—The flat over . . . to be constructed as detail, with 7 in. by 2½ in. fir joists firred up with 2½ in. timber to falls of 2 in. (or 1½ in.) in 10 ft. To have all necessary deal rolls 2 in. diameter, properly rebated drips 2½ in. deep, and form dished and rebated sinkings with holes for outlet pipes.

Form flat over dormer windows where shown, and bays with 4½ in. by 2½ in. rafters firred to falls and notched to bearers as required.

Form flat over verandah with 5 in. by 2½ in. wrot and twice moulded rafters framed into 9 in. by 2½ in. wrot and moulded bearers to wall and eaves.

Notes.—The foregoing are for roofs over a country house and outhouses. Other types of roofs employed are the queen post, Mansard, &c., and the sizes of the members for these and the king post vary according to the plans.

The following items are in connection with all types of roofs :—

179. Wall Gutters.—To be not less than 9 in. in width in the narrowest part, with 1 in. rough deal boarding on 2½ in. by 2 in. bearers, framed where required or fixed to fillets secured to wall laid to falls not less than 1½ in. in 10 ft. To have cross rebated drips and 1½ in. angle fillets. Form similar small gutters around skylights, chimney stacks, dormers, &c.

180. Box Gutters.—To be 12 in. wide (or as required), with 3 in. kerbs, and formed with similar gutter boarding, bearers, drips, &c., as to wall gutters.

181. Cesspools.—Where indicated, 1½ in. dovetailed cesspools are to be formed with holes cut and dished for outlet pipes as before.

182. Secret Gutters.—Form secret gutters, 2 in. wide, on fillet pieces at hips, and against walls, chimney stacks, skylights, dormers, &c., to be 3 in. wide with tilting fillets.

183. Valleys.—Form valleys with 1 in. (or ¾ in.) rough deal boards, splayed and with angle fillet at junction.

184. Tilting Fillets.—Put . . . in. by . . . in. tilting fillets to all eaves, valleys, &c., as required.

185. Hip and Ridge Roll.—To be 2 in. by 2 in. rounded deal (state if bird's-mouthed). This roll is used for lead ridges, &c.

186. Roof Boarding.—Cover roofs with 1 in. rough deal boarding, edges shot laid with horizontal joints (or diagonal), with a layer of . . . felt over same fixed with clout nails. Boarding to be wrot where exposed under eaves or verges.

Or cover roof with 1 in. feather-edge boarding width to be equal to gauge of tile.

Note.—Battens can be used on boarded roofs, or the tiles, slates, &c., can be fixed direct to the boarding. Feather-edge boarding can have felt placed on the rafters and under the boarding if required.

187. Fascia.—To be 7 in. by 1 in. wrot and chamfered. That to dormers, bays, &c., to be 5 in. by 1 in. wrot and chamfered.

188. Eaves Soffit.—To be formed with 1 in. V-jointed boarding fixed to bearers with small mold against wall and fascia.

Note.—The soffit can also be formed with moulded panelling, plaster, &c., and in some cases ordinary roofing tiles are used for this purpose.

189. Barge Board.—To be . . . by 1½ in. (or 2 in.) wrot on faces and edges with cut-shaped ends, staff beaded (chamfered or moulded) on edge. To have . . . by . . . in. moulding under slating. Rafters, purlin, &c., to be wrot where exposed to view or the soffits to be finished as described in previous item.

190. Snow Cradling.—To be provided to all lead gutters in lengths not exceeding 10 ft. Fillets to be of 1½ in. by 1 in. sawn fir, ¾ in. apart, secured to 2½ in. by 2 in. hollowed bearers not exceeding 4 ft. apart. To be twice tarred or creosoted.

191. Cat Ladders.—Provide and fix . . . run 9 in. by 1½ in., with 2 in. by 1 in. fillets screwed to same 18 in. apart, twice tarred all over. To have 1½ in. by ⅜ in. wrot iron clips to ridge.

192. Trap Door.—Trim for opening 2 ft. by 1 ft. 9 in., put 2 in. deal curl wrot one side, standing 6 in. above slating, with 1½ in. angle fillet round sides and small gutter at top. Form door with 1¼ in. V-jointed boarding and two 4½ in. by 1 in. wrot ledges, and 1½ in. by ⅜ in. fillet grooved into door all round. Hang door on pair 3 in. wrot-iron butts and fasten with two 6 in. barrel bolts. (The top can be covered with lead, zinc or copper.)

193. Glazed Trap-door.—This is formed in a similar way, with a skylight sash taking the place of the door previously specified.

194. Dormer Access to Roof.—The dormer to roof to be constructed as shown on details with 4 in. by 2 in. studs, 4 in. by 3 in. heads and cills, and 4 in. by 4 in. corner posts, with 4 in. by 2 in. firred joists to roof. Cover top and sides with 1 in. rough boarding edges shot with 2 in. rounded roll round top edge and angle fillet to sides next roof. Put 4 in. by 2 in. rebated frame with 7 in. by 3 in. weathered, throated and rebated oak cill and hang in same on pair of 3 in. butts 1½ in. . . . doors (give description). Fit pull handle to both sides and two 8 in. iron bolts to inner side.

195. Dormer Windows.—The dormers to . . . to be constructed as shown on details with 4 in. by 2½ in. muntins, 4½ in. by 4 in. angle posts, 4 in. by 3 in. heads, all rebated and twice beaded or chamfered, and 7 in. by 3 in. teak, or oak, sunk weathered, throated, beaded and grooved cills. Fill in to same with 1½ in. moulded casement lights hung to open where indicated on a pair of 4 in. wrot-iron butts and fitted with japanned iron casement stay and fastener p.c. . . . The stay and fastener to . . . window to be of brass p.c. . . . The dormer cheeks to be covered outside with ¾ in. rough, or wrot, boarding edges shot. Finish inside with window boards and architrave as hereafter specified.

196. Skylight.—The skylight over . . . to have lantern light under, with muntins, angle posts, heads as figured or shown, and 9 in. by 4 in. teak sunk weathered, throated and grooved cills, rebated and moulded, and pierced, for condensation outlets. Fill in with 2 in. moulded sashes hung on strong brass centres. Provide and fix to sashes strong plaited flax cords (No. 3), 1½ in. brass plate pulleys, 4 in. quadrant, and approved wrought iron japanned cleats fixed on walls except those to . . . which are to be provided with opening gear, p.c. . . . per set. The skylight bars to be 3 in. by 2 in. moulded and rebated with 4½ in. by 3 in. moulded and rebated hips and ridges. Finish outside with 2 in. rolls to ridge and hips for lead.

The curb to be 3 in. thick standing . . above level of flat at highest point grooved all round for water bar and dovetailed at angles.

Note.—If the lantern curb is very deep it can be formed with a cradling consisting of heads cills, angle posts, and studs, and covered externally with boarding for lead.

197. Linings.—To be 1 in. wrot, deal grooved and tongued V-jointed boarding with beaded edge and soffit moulding on narrow ground.

Or 1½ in. wrot deal moulded panelled framing, tongued at angles and soffit moulding on narrow ground.

Put 3 in. by 2 in. capping moulding and 2 in. by 1½ in. necking moulding all as detail.

Notes.—If the skylight is without vertical lights the curb would take the place of the cill and would be specified 3 in. thick splayed rough deal. The apron linings, &c., would be as already specified.

198. Ceiling Light.—Form ceiling light with 2 in. moulded sash in small squares, rebated for and glazed with . . . oz. Arctic or other approved obscured glass. Fix moulding around opening as fillet for sash.

Note.—Provision should be made for cleaning. If the light is small it could be hung to the curb and drop downwards, otherwise access must be provided through the skylight.

199. Cistern and Safes.—To . . . to be of 1½ in. wrot and cross-tongued deal dovetailed at angles, bottoms screwed on. That . . . to have 2 in. sides grooved together and secured with two ⅜ in. bolts, heads and nuts at either end, and 2½ in. by ⅛ in. wrot iron straps. Bottom to be 2 in. screwed on as before. Holes bored and sunk for waste and services.

The cisterns . . . to have 1½ in. deal safes with splayed edge out of 2½ in. by 1 in., bored for wastes.

To have ¾ in. deal wrought and matched covers, part hung with 8 in. cross garnets. To have any necessary bearers.

200. Half-timber Framing.—The framing to be in English oak wrot and twice oiled on exposed faces grooved for plaster and mouldings, rebated for door and window frames, mortised and tenoned and pinned at each joint with two oak pins projecting ½ in. (or less) from face of work.

Then specify the sizes of the various timbers and labours to same according to details.

Notes.—The timber framing should have a brick backing at least 4½ in. thick, or in accordance with the by-laws, the space between the timbers being filled with brickwork and finished stucco or rough cast in cement. Overhanging stories are supported upon the floor joists which project for that purpose. These, if without plaster soffit, should be in hardwood and can be moulded with shaped ends.

201. Half-timbered Gables.—Form the half-timbered gables where shown with 9 in. by 2 in. wrot teak, or oak uprights, and 12 in. by 7 in. moulded and stopped chamfered cill, all framed and pinned together with pins, the latter projecting ¼ in. from face of frame. To be plugged to walls and splayed at edges for key to rough cast.

Note.—This applies to half-timbered work that is fixed to and not built into the brickwork.

202. Floors.—To . . . to be of 1 in. red deal battens laid straight joint with splayed headings.

To . . . to be of 1 in. red deal tongued and grooved battens laid straight joint with splayed headings.

To . . . to be of 1¼ in. red deal (or pitch pine) rebated tongued and grooved half-battens laid straight joint with splayed headings and side nailed.

To . . . to be 1¼ in. English oak (or imported, state country), with . . . per cent. of figure rebated tongued and grooved boards . . . in wide laid straight joint with splayed headings and side nailed.

To . . . to be 1¼ in. rebated and filleted maple boards in 4 in. widths laid straight joint with splayed headings.

All floor boards to be compressed into their places with patent levers or cramps and nailed with cut flooring nails two to each joist, except the secret nailed floors.

All hearths to have 3 in. mitred borders.

Note.—Generally floors are either square-edged or tongued and grooved. Iron tongues are seldom used. Repairs and alterations to floors with iron tongues are more costly than to floors with wood tongues.

Splayed headings should be used in preference to square heading joints.

Secret nailed floors are only used for reception rooms or dancing floors, and the smaller the width of the flooring the less will be the shrinkage, especially in pitch pine. Floors to reception rooms can be laid on a deal counter floor. The floor boards should be laid the long way of the room for effect.

Floors that are polished require to be scraped over after laying. Dancing floors are only wax polished.

THE WEEK IN PARLIAMENT

WESTMINSTER, *Wednesday.*

Advances for House Purchase.

Mr. N. Chamberlain informed Mr. Day that the following table showed the number of houses, and (*a*) the amounts of advances agreed to be made direct by the London County Council, and (*b*) loans sanctioned by the London County Council, for the purposes of advances by Metropolitan Borough Councils, under the Small Dwellings Acquisition Act, during 1923, 1924, and 1925 :—

	No. of Houses.	Amount.
(A) *Advances by L.C.C. direct* :		£
1923	37 ..	25,050
1924	263 ..	163,250
1925	235 ..	146,070
(B) *Loans sanctioned by L.C.C. for purposes of advances by Metropolitan Borough Councils* :		
1923.		
Woolwich	2 ..	465
1924.		
Hackney	15 ..	8,925
Hammersmith ..	8 ..	4,100
Islington	25 ..	13,745
Woolwich	187 ..	86,910
1925.		
Hackney	37 ..	23,370
Hammersmith ..	7 ..	4,525
Islington	47 ..	30,605
Stoke Newington	13 ..	5,230
Woolwich	181 ..	90,755

The London County Council had also made the following advances under Section 92 of the Housing Act, 1925, to persons erecting houses :—

	No. of Houses.	Amount.
		£
1923	6 ..	4,880
1924	494 ..	310,650
1925	1,228 ..	769,360

Mr. R. Morrison asked the Minister of Health if he was aware that a number of local authorities making grants under the Small Dwellings Acquisition Act had recently increased the amount of interest charged upon the loans from 5 per cent. to 5¼ per cent. ; and if he could give any information as to why this had become necessary.

Mr. N. Chamberlain said that the rate of interest to be charged by local authorities on loans advanced by them under the Small Dwellings Acquisition Acts was increased by Order made on January 26, 1926, from 5 per cent. to 5¼ per cent., consequent on the rate of interest charged on advances from the Local Loans Fund being raised from 4¾ per cent. to 5 per cent. as from January 1. If any local authority could satisfy him that, having regard to the terms at which they could borrow for the purpose, they could properly lend at a lower rate than 5¼ per cent., he was prepared to make a special Order authorising a lower rate as respected that authority.

Fire Risks.

Sir H. Brittain asked the Secretary for Scotland whether he was taking any steps to prevent imported insulated electric wire, in which reclaimed rubber had been used, being utilised in buildings in the erection of which his department had jurisdiction, in view of the risk of fire arising owing to the reclaimed rubber disintegrating the insulation and setting up short circuit.

Sir J. Gilmour said that his attention had not been called to any instance in which material, such as was referred to had been used. Having regard to the terms of Section 10 (1) of the Housing (Financial Provisions) Act, 1924, he was precluded from taking any steps to prevent the use of imported materials on assisted housing schemes, but all houses erected with State subsidy must comply with the requirement of the Scottish Board of Health that the materials used must be of good quality such as was ordinarily specified by a local authority in a contract for working-class houses. In the event of the Board being satisfied that materials not in compliance with their requirements had been used in subsidised houses, they would take steps to withhold payment of the State subsidy. Material such as was referred to in the question was not according to the Board's General Specification, and if brought to their notice would not be passed as complying with the Board's requirements.

Foreign Bricks.

Colonel Woodcock asked the Minister of Health whether, in view of the annual increase in this country of imported foreign bricks of inferior quality, he would stipulate that British-made bricks should be specified in contracts for houses built under the housing schemes, in a similar manner to the Office of Works, who always stipulated in their contracts that British bricks should be used.

Mr. Chamberlain said that section 10 of the Housing Act, 1924, provided that, in approving proposals for the construction of houses, the Minister of Health should not impose any conditions which would prevent the materials required being purchased in the cheapest market at home or abroad. The Government had, however, urged local authorities to arrange that all contracts for or incidental to works carried out by them should in the absence of special circumstances, be placed in this country. The bricks imported during the year 1925 were under 3 per cent. of the total estimated home production.

Lead Paint Bill.

Sir W. Joynson-Hicks, the Home Secretary, informed Mr. R. Davies that he hoped to reintroduce very shortly the Bill he presented last session to give effect to the International Convention on Lead Paint.

Office of Works Housing Estates.

Captain Hacking informed Lady Astor that the following was a list of the housing estates managed by the Office of Works :—Woolwich (East Wickham, Lodge-lane, Bostall, Churchfield, Well Hall, Corbett, Shepherd's Farm, Archery-place), Greenwich (Tunnel-avenue), Coventry (Holbrook-lane), Dudley (Brewery Fields), Sheffield (Petre-street, Tyler-street, Tinsley), Chepstow (Hardwick, Bulwark, Sedbury), Queensferry, near Chester (Mancot Royal), Barrow (Roosegate), Newcastle-on-Tyne (Birtley, Scotswood), Renfrew (Inchinnan), Glengarnock (Glengarnock), Mid-Lanarkshire (Cambuslang, Carmyle, North-road, Calder-road, Coronation-road, Thankerton), Dumbarton (Alexandria), Invergordon.

Steel Houses for Scotland.

A further debate on the Government's proposal to build steel houses in Scotland took place on the report stage of the Scottish estimates.

Sir John Gilmour, the Secretary for Scotland, said that since the last debate he had had the opportunity of conversations with representatives of the employers and employed in the building trade. He received from the leaders of the trade unions the assurances that they desired to facilitate in every way house building in Scotland. Though these conversations had not yet led to any definite conclusion, it could not be said that it was impossible that such similar conversations might be reopened. He was always willing to do anything to facilitate progress in the matter. The main concern of the Government was to obtain rapid progress in house construction by whatever method might be possible. In the contracts into which the National Housing Company of Scotland was entering there was inserted the fair wages clause, and, in the judgment of the Government, that clause was properly inserted, and was being interpreted in the proper spirit. He had never taken the attitude that there was no possibility of some accommodation on such things as the rates of wages for the unskilled or semi-skilled operatives in the production of steel houses, nor had anything that had passed ruled out the possibility of further consideration with the question. If, however, it was felt that over and above this the request must be pressed for full building trade rates and conditions, notwithstanding new processes and simplified methods deliberately adopted to avoid calling on highly-skilled building trade craftsmen and to give employment to other classes of men, then a new difficulty would be created. The Government would then be asked to go back on the considered judgment of the Bradbury Report, and, indeed, to adopt a policy which would be inconsistent with the principles of modern industrial development. The Government's interpretation of the Bradbury Report made it clear that new methods had been adopted, that they were capable of being put into operation by unskilled men, and that the essence of the scheme was that it should call upon a pool of industry which was not concerned in ordinary house-building methods. The Government were faced in Scotland with a problem of enormous magnitude, but they had at present sanctioned a scheme for the construction of anything between 13,000 and 15,000 houses, and that might be materially increased. He hoped nothing would be said to preclude the possibility of proceeding at the greatest possible speed with the development by ordinary building methods, nor, indeed anything which would utterly close the door to further negotiations, if possible, in the minor questions. In his judgment, if a reasonable and helpful state of mind was adopted by the parties engaged in this problem, it was not beyond human conception that they might arrive at an arrangement which would be just and fair to the men employed in the production of steel houses and which would give that which the country demanded—the rapid production of houses.

In the debate which followed, Mr. Ramsay MacDonald, while waiving his prejudice against the steel houses in view of the urgent necessity for more houses, maintained that the wages paid to the men engaged in the erection of them must be the result of collective bargaining and common agreement. In order to make the fair wages clause operative, there must be collective bargaining and common agreement. The contention of the Building Trades Federation was perfectly clear—that the labour on such houses which belonged to the building trade should be paid at building trade rates. That was the principle of the case. The Labour Party protested against a great industry being driven back to lower wages. He believed that steel houses and mass production had come to stay, but if labour could not win its point in regard to collective bargaining and obtaining a satisfactory standard of wages, it had lost the day.

Mr. Johnston, the Labour member for Dundee, maintained that Lord Weir was not interpreting the fair wages clauses as the trade unions and building trade employers interpreted it, but he was going to insist on the rates of wages paid by the Amalgamated Society of Engineers, and he was not going to allow builders' rates to be paid, because he declared that it was not a builder's job. The building trade did not claim that the structural steel part of the work in the Weir houses was a building trade job, but the part of the work that was building trade work should be paid building trade wages.

Captain Elliot, the Under-Secretary for the Scottish Board of Health, said that, so far as housing in Scotland was concerned, the Government were not getting delivery of the goods. They had authorised the biggest building programme ever authorised in Scotland. There were 13,500 brick houses actually under construction, and they had authorised 17,000. They had done more by deeds to prove their friendly attitude towards the building trade than by mere words. The questions at issue were not insoluble, and there was no reason why agreement as to the wages to be paid should not be reached. The way was open for negotiations on the matter.

The Labour Party, however, insisted on dividing the House, and the estimates were carried by 294 votes to 124.

Office of Works' Houses.

In reply to Lieutenant-Commander Kenworthy, who asked how many dwelling-houses are now under construction by the Office of Works, Capt. Hacking said that, apart from

62 cottages for Coastguard *personnel* and for the staff of a State institution, no dwelling-houses were under construction by the Office of Works, nor was the building of any such houses under contemplation.

New Government Buildings.

Mr. Harris asked the cost of the buildings now being erected on the open space behind Montagu House and the Victoria Embankment and what was the accommodation provided therein; why they had been built of bricks and slate, though the buildings were apparently of a temporary character; and what was the expected life of these buildings.

Captain Hacking, for the First Commissioner of Works, said that provision of £27,275 was made in the Estimates (Class I, 9) for the current year for the erection of these buildings and the reconditioning of an existing building; accommodation for a staff of 370 would be provided; the form of construction was adopted partly with a view to future economy in maintenance and partly on the ground that a substantial proportion of the material used, such as concrete blocks and slates, were available either in store or on the site; the expected life of buildings was from 15 to 20 years.

Repair of the House of Commons.

Mr. Sandeman asked how the renovation of the House of Commons was progressing.

Captain Hacking said that nothing was being done at present beyond hand-picking, to prevent danger from falling masonry. The actual repairs to the stonework would not be undertaken until the policy to be adopted had been fully considered and an estimate had been submitted to the House.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

May we appeal to our correspondents to submit their queries on paper of a size easily filed, and written as legibly as possible, or, better still, in typewriting?—ED.

Damp Wall.

[REPLY TO MR. C. BAKER, FEBRUARY 26.]

SIR,—May I urge upon your correspondent the wisdom of allowing the wall in question to dry out naturally now that the origin of the trouble has been presumably removed. The sealing of a surface by a waterproofing liquid naturally retards the drying out of the wall to the detriment of any timbers built into it, or of any joinery abutting thereon where it is impossible to apply the solution. Provided plenty of fresh air is allowed to play upon the wall and fires lit (or oil stoves where this is not practical) this drying out process is not a matter of many weeks. I may further quote an instance of which I have had recent experience. On a building being erected in sections, a solid 9 in. wall temporarily an external wall, was exposed to the heavy rains, and also to the drainage from the solid floors adjoining. The inside plastered surface had water literally pouring down it for several weeks. As soon as the adjoining portion of the building was roofed in and watertight, a gas fire was maintained in the rooms affected, and the windows kept open, and within four weeks the plaster surface was bone dry. NATURE.

Girders Cased in Concrete.

SIR,—I am extremely obliged to Mr. Forster for his very adequate reply to my query upon the above subject. I should, however, like to ask him, or any other of your correspondents, whether there are any reliable records of tests upon the relative strength of a steel member and the same member cased in concrete. I cannot help feeling that the added strength given to an "H" section by wedging good concrete between its flanges must be considerable, even in the case of a bressummer, and even the 01 per cent. suggested by Mr. Forster can hardly be ignored when it may be the means of turning the scale in favour of a lighter section. There is a strong suspicion among architects that the structural engineer is prone to design in much heavier members than necessary, and to-day we can ill afford to pay for more than a reasonable margin of safety.

QUESTION.

Flat Roof.

[REPLY TO "R.M.P." JANUARY 29].

SIR,—Further to my reply to this query, and to your correspondent's recent comment, I had in mind, in my first reply, a fire-resisting roof. I regret I do not agree with "Flat" in it's view that falls are not needed with asphalt. I recently recalled the asphalt contractors to a job owing to pools of water gathering on flats that had little or no fall.

G. W. H.

Steel Framed Houses.

[REPLY TO "BEGINNER," FEBRUARY 26.]

SIR,—If the steelwork is covered with a wire fabric, no doubt ¾ in. of concrete would be enough, if of the fine variety. In the case of the floor-bearing girders, they could be treated as above, and most contracts dealing with steel stipulate it shall not be painted or treated with any compound if subsequently buried in concrete. I am doing a job at the moment with this reservation.

G. W. H.

Cost of Painting Job.

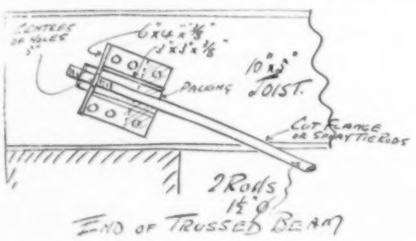
SIR,—In submitting an account for a job mainly consisting of painter's work, I have taken the cost plus 5 per cent. and 15 per cent. to cover superintendence, wear and tear of brushes, use and hire of plant, workmen's compensation and third party insurance, Health and Unemployment stamps, and profit. Would you consider this a reasonable charge, and one which would be upheld in Court? The 5 per cent. mentioned above is for establishment charges.

F. H. W.

Conversion of R.S.J. to Trussed Girder.

[REPLY TO "R. S. K.," FEBRUARY 26.]

SIR,—In the question on the trussing of a girder "S. J. K." makes an error. A rod 1½ in. diameter is not nearly strong enough if the



depth of the girder is 1 ft. 2 in. below bottom flange of 10 in. by 5 in. R.S.J. If "S. J. K." makes the depth 3 ft. and uses two rods 1½ in. diameter, he will be about right, for the tension in each would then be round 8 tons per sq. in. The connection would then be made as shown in sketch.

NEWMAN TATE, M.I.Struct.E.

SIR,—Though neither is a strictly parallel case, I would like to describe two instances of the effect of converting existing members for increased burdens, both of which I have seen many years after execution. In the first case, a two spanned timber roof truss to a factory, supported in the middle on a C.I. column, was converted by ingenious tie rods and plates into a single span of 40 ft., and the centre column removed. After about twenty years the roof showed serious signs of failure in some of the subsidiary members. The theoretical stresses on the various members were all correct, but it appeared that the roof, having developed a certain habit of resistance on the original lines, resented the unaccustomed distribution and slowly failed.

In another case a shop over which was an old-fashioned concrete floor in three spans between girders was enlarged, and a new wall on the first floor built over the line of one of the girders. The girder was a 12 in. by 6 in., and it was strengthend by bolting another of the same size to its under flange. This building I saw demolished about twenty-five years after this was done, and everything was quite sound. This latter method may be possible in the case in point, and while, theoretically, by doubling the depth of the girder, its strength in tension and compression may be sufficient for the doubled span, the choice of a 12 in. by 6 in., bolted on the bottom flange, may be safer. The upper flange being in compression, the joint between the two old members is not a serious weakness; while plenty of bolts may be used between the upper and lower members, because this is near the neutral axis and the whole thing is stiff and rigid. I can see serious danger of buckling in the method proposed by your correspondent.

SAFETY.

Sale of Estates and Property.

SIR,—The R.I.B.A. Kalendar (page 539, clause 18) gives the charge to be made for negotiating the sale of estates and property, or introducing a purchaser, and advising as to value if required. But I learn that this charge cannot be made where no purchase is effected. Please say, in cases where no purchase is effected, what is the proper charge to make and the form in which it should be put. The preceding clause of the R.I.B.A. Kalendar (No. 17), relating to sales of property, states that where no purchase is effected the usual fee for valuation will be charged. And I understand that a charge may be made for all work done and expenses incurred. Would this apply to clause 18, or should the charge made be more? Is the fee for valuation to be taken as Ryde's scale?

X. P.

Closing a Mortuary.

SIR,—A mortuary owned and used by an undertaker is part of an old timber building, the remaining portion being used as garage and workshops. The mortuary is within 15 ft. of the windows and kitchen door of a dwelling house, and in part abuts on the adjoining owners' property. The town council and the owner attempt to throw the onus of any closing of this place and stopping of the nuisance on the leaseholder, who took over the dwelling house without knowledge of the existence of this mortuary. What regulations are in force under the Public Health Act or any other regulation governing the erection and use of mortuaries? M.

[In view of the facts stated there should be no difficulty in dealing with the mortuary referred to as a nuisance.

A local authority has power to provide a mortuary under Section 141 of The Public Health Act, 1875, and Section 175 provides for the acquisition of a site for the purpose.

The Local Government Board, now the Ministry of Health, issues a memoranda as to the site and construction of the mortuary. Among other things the building is to be isolated and unobtrusive, concealed from public view, of substantial and incombustible materials, and either ceiled or covered with a double roof; the floors and walls solid and impervious, and everything internally capable of being readily cleansed and disinfected; well lighted and ventilated, with water laid on, and with at least two compartments, &c.

This memoranda will assist the enquirer in attaining his object.

Mortuaries may also be provided under Section 42 of the Burial Act, 1852, which was extended to parishes beyond the Metropolis by the Burial Act, 1853.—ED.]

THE BUILDING TRADE

SOME OBSERVATIONS ON WORKMEN'S COMPENSATION.—IX

(IN CONNECTION WITH THE AMENDING ACT, 1923).

IN our last article we dealt with the compensation payable in fatal cases, and we now come to the compensation payable in cases of total or partial incapacity. The amendments introduced in connection with this question are of great complexity, and it is difficult to set them forth clearly, but the consolidating Act, 1925, is of some assistance, and the provisions relating to the amount of compensation in cases of total or partial incapacity will be found in section 9.

Compensation for Total and Partial Incapacity.

In the principal Act the compensation in cases of both total and partial incapacity is dealt with in the First Schedule in paragraph (1) (*b*) and paragraph (3). Paragraph (1) (*b*) provides that the compensation shall be "Where total or partial incapacity for work results from the injury a weekly payment during the incapacity not exceeding 50 per cent. of the average weekly earnings during the previous 12 months if the workman has been so long employed, but if not then for any less period during which he has been in the employment of the same employer, such weekly payments not to exceed £1." This limit of £1 has been raised to 30s. by section 4 subsection (1) of the amending Act, 1923.

There were two provisos to this paragraph, the first relating to the waiting period, and the second to workmen under 21 years of age totally incapacitated The first of these is repealed by section 5 of the amending Act, 1923, which provides that the compensation shall be payable if the injury disables the workman for more than three days, but is not payable for the first three days unless the incapacity lasts for four weeks or upwards (see under heading, "Waiting Period," Article V); the second has been repealed by section 4 subsection (4) as the new scales of compensation have rendered it unnecessary.

Paragraph (3) of the First Schedule of the principal Act which prescribed how the compensation was to be assessed in cases of partial incapacity has been repealed by section 31 subsection (5) and the Second Schedule of the amending Act, 1923, except the first paragraph, which provides: "In fixing the amount of the weekly payment regard shall be had to any payment allowance or benefit which the workman may receive from the employer during the period of his incapacity."

The effect of these amendments can be gathered from section 9 subsection (1) of the consolidating Act, 1925. This section commences with a general statement: "The compensation under this Act where total or partial incapacity results from the injury shall be a weekly payment during the incapacity of an amount calculated in accordance with the rules hereinafter contained. Provided that (*a*) if the incapacity lasts less than four weeks no compensation shall be payable in respect of the first 3 days; (*b*) in fixing the amount of the weekly payment regard shall be had to any payment allowance or benefit which the workman may receive from the employer during the period of his incapacity; and (*c*) the weekly payment shall in no case exceed 30s. The above extract gives the effect of the amendments common to both classes of incapacity but to ascertain how the weekly payments are to be computed we must deal separately with total and partial incapacity.

Total Incapacity.

Where the incapacity is total the weekly payment is calculated in accordance with paragraph (1) (*b*) of the First Schedule of the principal Act which we set out at the commencement of this article as amended by the limit of £1 being raised to 30s., unless the sum so calculated is less than 25s. In the consolidating Act this paragraph is set out in section 9 subsection (2) as the first rule.

Where, however, the weekly payment as thus calculated amounts to less than 25s. a new provision has been introduced by section 4 subsection (2) of the amending Act, 1923, as follows: "Where the maximum weekly payment payable under the principal Act as amended by the foregoing subsection" (that is as to the limit of 30s. in place of £1) "to a workman who is totally incapacitated is less than 25s., the workman shall be entitled during such incapacity to a weekly addition equal to one-half of the difference between such maximum weekly payment and the sum of 25s., or his average weekly earnings, whichever is the less, and such addition shall for all the purposes of the principal Act be treated as if it were part of the weekly payment." This subsection forms the second rule in section 9 subsection (2) of the consolidating Act, 1925. It does not appear at all clearly expressed, and its meaning would be more easily grasped if it ran, "a weekly addition equal to one-half the difference between the maximum weekly payment and the sum of 25s., or between such maximum weekly payment and his average weekly earnings, whichever is the less."

The effect of the subsection may be illustrated by two examples:—Say a man was earning £2 before the accident; the maximum weekly payment would therefore be £1; half the difference between £1 and 25s. is 2s. 6d., but half the difference between £1 and the wages he was earning would be 10s. Therefore in this case as the less sum has to be taken, the compensation is £1 2s. 6d., the half difference between the earnings and 25s. But we will say a boy is earning 10s.; the maximum payment would then be 5s.; half the difference between 5s. and 25s. would be 10s., but half the difference between 5s. and the sum he was earning would be 2s. 6d. The less sum being taken, the compensation is 7s. 6d.

Partial Incapacity.

It is important to understand the above rules for calculating the compensation in cases of total incapacity, because the rules relating to the calculation of compensation in cases of partial incapacity are framed upon them.

These latter rules are contained in section 4 subsection (3), of the amending Act. The subsection is as follows: "In the case of partial incapacity the weekly payment shall, subject to the provisions of paragraph (3) of Schedule I of the principal Act, be of the following amount." Pausing here, we must remind our readers that, as we have shown above, the greater part of paragraph (3) has been repealed by virtue of section 31, and the Second Schedule to the Act, the only portion remaining operative being that part relating to payments, allowances, &c., paid by the employer during incapacity; therefore this subsection should have been worded: "Subject to such of the provisions of paragraph (3) as remain unrepealed by this Act." This point is made clear in the consolidating Act, where, as we have shown, the unrepealed portion of paragraph (3) occurs in section 9 subsection (1) being of general application to cases both of total and partial incapacity, the rules we are about to refer to being contained in section 9 subsection (3).

The first rule is: "If the maximum weekly payment, had the incapacity been total incapacity, would have amounted to 25s. a week or upwards, the weekly payment in case of partial incapacity shall be one-half the difference between the amount of the weekly average earnings of the workman before the accident and the average weekly amount which he is able to earn in some suitable employment or business after the accident." This rule takes the place of the repealed portion of paragraph (3) which we have referred to above, which provided: "In the case of partial incapacity the weekly payment shall in no case exceed the difference between the amount of the average earnings of the workman before the accident and the average weekly amount which he is earning or is able to earn in some suitable employment or business after the accident, but shall bear such relation to the amount of that difference as under the circumstances of the case may appear proper." It will be seen that the effect of the amendment is to substitute a fixed proportion of the difference between the earnings of the workman before the accident and what he is able to earn after the accident, instead of leaving it indefinite.

The second rule in section 4 subsection (3) of the amending Act, 1923 [Section 9 subsection (3) of the Consolidating Act, 1925], deals with cases where the maximum weekly payment is less than 25s., and is as follows: "If the maximum weekly payment would, had the incapacity been total incapacity, have amounted, with such addition, if any, as is provided by subsection (2) of this section, to less than 25s., the weekly payment in case of partial incapacity shall be a sum bearing the same proportion to the said difference as the said maximum weekly payment, with such addition as aforesaid, bears to the average weekly earnings of the workman before the accident."

This rule has been the subject of much criticism, and it requires explanation. It will be observed that, in order to ascertain whether it applies at all, the rule contained in subsection (2), which relates to compensation in cases of total incapacity, has first to be consulted. [In the consolidating Act, 1925, this is rule (ii) in section 9 subsection (1).]

Having found under that rule that if the case was one of total incapacity, the compensation, with the addition there provided for, would not exceed 25s., and what the exact sum is, the proportion between that sum and the average weekly earnings of the workman before the accident has to be found, and this proportion has to be applied to the difference between the average weekly earnings of the workman before the accident and the amount he is earning or is able to earn after the accident.

The word "difference" is obscure in the second rule read by itself, but is explained by reference to the first rule.

An example will make the above explanation clearer. Applying this rule to the case we gave of a boy earning 10s. a week and able to earn after the accident 5s. The maximum payments with the addition, were the case one of total incapacity, we have shown would be 7s. 6d. This sum, compared with the weekly earnings before the accident, is three-q arters. Applying this proportion to the difference of what he was earning before the accident and what he is earning after the accident, which is 5s., the sum payable is three-quarters of this difference, or 3s. 9d.

Mr. Willis, in the twenty-third edition of his work on "Workmen's Compensation," gives a simple formula by which the amount of compensation under this rule can easily be ascertained. He multiplies the difference between the pre-accident earnings and the average amount the workman is able to earn after the accident by the maximum weekly payment with the addition, and divides the result by the average pre-accident earnings. Applying this formula to the example we have given above, the difference between the pre-accident earnings and the amount earned after the accident is 5s., the maximum weekly payment, with addition, is 7s. 6d.; these two sums, multiplied together, give 37s. 6d.; this sum, divided by the pre-accident earnings, which are 10s., gives 3s. 9d., the amount of the compensation. We commend Mr. Willis's formula to our readers, as furnishing a magic key for the solution of the problems involved in this complex rule.

DILAPIDATIONS AND WASTE.—IX

BY W. T. CRESWELL,
Lic.R.I.B.A.; Associate (late Fellow) Surveyors' Institution; F.R.San.I.; Barrister-at-Law.

REMEDIES FOR NON-REPAIR. DAMAGES FOR NON-REPAIR. FORFEITURE FOR NON-REPAIR.

A LESSEE is not liable for a breach of the covenant to repair committed before the lessor has executed the lease; nor for an initial period during which he was kept out of possession of the demised premises by the lessor.

One remedy open to either party for breach of covenant to repair is to sue for damages for the loss sustained. The Court will not invariably order specific performance of the covenant, though it may do so if it can be shown that there are specific and defined repairs. Or an injunction may be granted to restrain a lessee from keeping premises out of repair or illegally pulling down buildings, or directing repairs to be done beyond his liability to repair under the repairing covenant. (See Allport *v.* Securities Co., 1895, 72 L.T. 533; Jackson *v.* Normandy Brick Co., 1899, 1 Ch. 438; and Kennard *v.* Cory Bros., 1922, 2 Ch. 120.)

If the demise is not under seal, the remedy is by an action on the simple contract; but if the demise is under seal, the remedy is by an action on the covenant.

By granting a lease the lessor loses the right to possession of the demised premises during the term; therefore, unless there is a distinct stipulation in the lease giving the lessor the right of entry to repair, he has no right at common law to enter the premises for repairing, or, indeed, for any purpose whatever; and if he enters without the permission of the lessee he may be regarded as a trespasser.

There is usually, however, a stipulation in the lease that the lessor shall have the right to enter and view the state of repair of the premises from time to time, and further, that, on breach of the covenant, to repair, the lessor may himself execute the repairs and recover from the lessee.

There is an implied right of entry to repair where the lessor has covenanted to repair; and for him to enter the premises for a reasonable time to execute the repairs.

In Devonport *v.* Smith (1921), 2 Ch. 270, there was a lease entitling the lessor to re-enter. The lessee had failed to comply with the repairing covenant and the lessor had not exercised his right to re-enter and to repair, but had subsequently sold his reversion, "subject to and with the benefit of the lease," to a purchaser who was at the time aware of the existence of the breach. It was held that the purchaser could not himself claim a continuance of the right to re-enter.

The covenant to put in repair admits only of one breach; and damages for the loss sustained thereby can only be recovered once. There is no further remedy. But if the covenant is to "keep in repair," then the lessee is bound to do so at all times during the term; and for breach of this covenant, the lessor may bring an action during or after the term. If the breach is not remedied it becomes a continuing breach, and the fact that damages are recovered in one action does not preclude subsequent actions; but the amount recovered in any prior action or actions will be taken into account in assessing the damage in the later actions. In all cases, the premises must be out of repair at the time of commencement of the action, in order that the action for non-repair, and the repairing covenant, may be maintained. If the lessor executes the repairs himself, he cannot recover damages.

If the covenant requires to "leave in repair" only, there is no right of action until the end of the term.

The measure of damages for non-repair depends greatly upon whether the action for damages is brought during or after the term of the demise. (See Henderson *v.* Thorn, 1893, 2 Q.B. 164.)

Where there is a sub-lease, the sub-lessor is entitled to recover from the sub-lessee the cost of the repairs necessary to put the premises into that state of repair in which the sub-lessee had covenanted by the sub-lease to leave them. And he can maintain an action even though his own interests in the premises under the head-lease has been forfeited by breach on his own part. (See Davies *v.* Underwood, 1857, 2 H. & N. 570.)

Damages for Non-Repair during the Term.

The measure for damages in respect of a breach of a covenant to keep in repair when the action is brought during the term of the demise is generally limited to the depreciation in the saleable value of the reversion (see Doe *v.* Rowlands, 1841, 9 C. &.P. 734, and Henderson *v.* Thorn, *supra*). But it is not an universal rule. All the particular circumstances are taken into consideration, and the sum awarded must represent the actual damage sustained by the breach (see Conquest *v.* Ebbetts, 1846, A.C. 490).

The damages are not usually nominal, though if the lessee has repaired after the action they may be so (see Morony *v.* Ferguson, 1874, 8 I.R.C.L. 551).

When the lessor is himself the freeholder, and is entitled to the reversion of the property free of any liability on his side, the injury done to its saleable value is said to be the best test of the measure of the damages (see Ebbetts *v.* Conquest, 1895, 2 Ch. 377, C.A.).

Where the sub-lessee has notice of the original lease, and there is a sub-lease, and the sub-lessor is himself under a covenant to repair under the head-lease, that liability must be taken into account in determining the amount of the damage payable to him by the sub-lessee (see Ebbetts *v.* Conquest, *supra*).

A lessee (or sub-lessor) cannot recover from his sub-lessee the damages and costs of an action brought by the head-lessor, unless in the sub-lease, in addition to the covenant to repair, there is a covenant to indemnify the sub-lessor (see Ebbetts *v.* Conquest, *supra*).

In United Dairies, Ltd. *v.* Public Trustee (1923), 1. KB. 469, there was a breach of the covenant to repair under a lease, and it was held, in an action for damages for the breach, that the freehold reversioner was entitled, as against tenants in common, by assignment of the interests of the lessee, to have judgment entered against both of them for the whole amount of the damages, and not merely for one-half of the damages against each of them.

In Hewitt *v.* Rowlands (1924), 131 L.T. 757, C.A., there was a covenant by the landlord to "keep the cottage dry and the outside in repair." The cottage was over 150 years old, and had become very damp and was in a bad state of repair; and by reason of the damp some of the tenant's furniture was damaged. The cottage was subject to the Rent Restrictions Acts, and the tenant, after receiving a valid notice to quit on March 31, 1921, had remained in possession as a statutory tenant. On November 26, 1921, the tenant gave notice to repair under the covenant. Failing compliance, he claimed from the landlord a sum of about £600 to put the premises into a proper state of repair. It was held that in assessing the damages, two matters should be considered: (1) That the tenant ought not to complain of any damage suffered before he gave the notice in November, 1921; and (2) that the breach being a continuing breach, the damages should be assessed down to the date of assessment. The period to be considered was that between the notice to repair and the day upon which the damages were assessed. *Prima facie* the measure of damages for breach of the obligation was the difference between the value to the tenant of the house due to its bad condition during that period, as against its value during that period if the landlord, upon receipt of the notice, had fulfilled his obligation. The damages to the tenant's furniture during the said period must be included in the consideration of damages. In assessing the damages for the repairs and damage to furniture, consideration must be given to the extent of the landlord's obligation having regard to the age and structure of the premises.

Damages for Non-Repair after term has Ended.

After the term has expired the lessor can recover a sum sufficient to put the premises into a state of repair in which the tenant was bound to leave them. (See Joyner *v.* Weeks, 1891, 2 Q.B. 31 C.A.) Even though he (the lessor) intends to demolish the premises, or if the tenant has committed a breach by removing certain premises and that their removal has improved the premises. (See Morgan *v.* Hardy, 1886, 17 Q.B.D. 770; Inderwick *v.* Leech, 1884, Cab & El. 412; and Joyner *v.* Weeks, *supra*). Also he can recover from the retiring lessee any losses incurred by having premises empty while undergoing repair.

The lessor's action in these cases is brought on the covenant "to yield up" the premises in repair.

Forfeiture for Non-repair.

Another remedy a lessor has if there is a breach of the covenant to repair and the lease contains a stipulation for re-entry in case of such breach, is that of "re-entry for forfeiture" of the lease.

Section 146 of The Law of Property Act, 1925 (which amalgamates Section 14 of the Conveyancing Act, 1881, and Sections 2, 4 and 5 of the Conveyancing Act, 1892) deals with the statutory provisions in respect to restrictions on and relief from such forfeiture. If there was a proviso for re-entry for breach of the covenant to repair, then under Section 14 of The Conveyancing Act, 1881, gave: "A right of entry . . . shall not be enforceable . . . unless, or until, the lessor serves on the lessee a notice . . . requiring the lessee to remedy the breach, and, in any case, requiring the lessee to make compensation in money for the breach." This section only took in compensation for damages, and it was enacted under Section 2 of The Conveyancing and Law of Property Act, 1892, that "A lessor shall be entitled to recover, as a debt due to him from a lessee, and in addition to damages (if any) all reasonable costs and expenses properly incurred by the lessor in the employment of a solicitor and a surveyor or valuer, or otherwise, in reference to any breach giving rise to a right of re-entry or forfeiture; which, at the request of the lessee, is waived by the lessor by writing under his hand, or from which the lessee is relieved, under the provisions of the Conveyancing and Law of Property Act, 1881, or of this Act,"

The lessor in the notice must state the actual breach or breaches upon which he establishes his claim for possession; if he has not already sustained any expense or loss he need not demand compensation; but the notice must be such as shall enable the lessee to understand with reasonable certainty what is required of him and he must be given a reasonable opportunity of remedying the breach before any action is brought against him. (See Fletcher *v.* Nokes, 1897, 1 Ch. 271; Jolly *v.* Brown, 1914, 2 K.B. 109; and Fox *v.* Jolly, 1916, 1 A.C. 1.)

If the lessee remedies the breach within the reasonable time stated in the notice, no right of forfeiture arises, nor are any costs or expenses recoverable. (See Nind *v.* Nineteenth Century Building Society, 1894, 2 Q.B. 226.)

A notice requiring a tenant "to remove a structure" when two such structures had been erected was held to be invalid. (See Davenport *v.* Smith, 18921, 2 Ch. 270.)

Similarly a mere general notice such as "You have broken the covenants for repairing the inside and outside of the house," is invalid.

A notice is good if it is clear as regards some of the items, even if it includes also items which do not fall within the covenant to repair. (See Fox *v.* Jolly, *supra*.)

Nor is a notice invalid if the lessor fails to establish all the breaches alleged (See Pannell *v.* City of London Brewery Co., 1900, 1 Ch. 496.)

In Guillemard *v.* Silverthorne, 1908, 99 L.T. 584, a notice was held to be bad which set out

the general covenant to repair and then set out two special covenants as to painting which were not embodied in the lease. The lessee was then required to remedy dilapidations set out in a schedule annexed to the notice some of which were not properly referable to the general covenant in the lease. That is to say, the notice did not specify in particular even one breach under the covenant, so was invalid.

If the lease provides for the lessor to recover the expenses of repair, his right to the forfeiture of the premises for breach of the covenant to repair is waived thereby.

A sub-lessor has no right of entry to view and repair unless there is a special stipulation in the sub-lease enabling him to do so, even if he himself is liable to forefeiture under the head-lease for breach of the covenant to repair, and the sub-lessee has again tenants who have agreed to him doing so.

Under Section 146 of the Law of Property Act, 1925, the Court has power to grant relief from forfeiture arising through breaches of any kind of covenant within certain limitations.

Section 147 of the Act contains new provisions as regards notices served on lessees relating to the internal decoration and repairs of buildings. The court, if it thinks notices "unreasonable," has power to relieve the lessees wholly or partially from liability for such repairs.. This power does not apply when (1) an express undertaking exists to put building in repair and has never been performed; (2) when the matter is necessary or proper to maintain the building in a proper sanitary condition or to preserve it; (3) when there is any statutory liability to keep the premises fit for human habitation—(Section 15 (1) Housing, Town-Planning, &c., Act, 1909)—(4) when there is a covenant to yield up at the end of the term in a specified state of repair.

A lease in this section includes an underlease and an agreement for a lease, and the section applies notwithstanding any stipulation to the contrary even if the notice was served before 1926.

Where the lessor has covenanted to repair and the premises become ruinous or out of repair, the lessee may if the lessor fails after request to do so, repair as required, or rebuild, and recover from the lessor the cost and damages for unreasonable delay. (See Green *v.* Eales, 1841, 2 Q.B. 225 and Manchester Bonded Warehouse Co. *v.* Carr, 1880, 5 C.P.D. 507.)

TIMBER STANDARDISATION IN AMERICA

THE adoption of the American Lumber Standards and the introduction of the grade-marking of timber, at the instigation of Mr. Herbert Hoover, the Secretary of Commerce, have met with approval amongst American builders. It has been asserted (writes a correspondent) that too often the local timber yard 'has been the dumping ground for all sorts of odd sizes and low grades," and many builders have found this to be true to their cost when delays and heavy expense have occurred in constructional work because timber had to be rejected after its delivery on the job.

Standardisation will limit the sizes of timber to a very considerable extent. Up till now there have been, in America, a score or more of different groups of producers, all manufacturing timber in as many different lengths, widths, thicknesses, grades, and grade descriptions, a situation leading to much confusion and unnecessary waste. The first group of producers to put grade-marking into operation has been the Southern Pine Association, of New Orleans. The method followed is to brand the end of each board with a number indicating the producer. The letters "S.P.A." also appear as a guarantee that the piece has been passed by the expert of the Association and is O.K. in dimensions and quality. There is likewise added an abbreviation giving the correct quality of the timber.

In a public pronouncement Mr. Leo Kraemer, forest products engineer of the Association, recently referred to the value of wood as a building material and outlined some of the advantages to be derived from the general adoption of standardisation and grade-marking. Builders, he said, would now be greatly assisted in the proper use of wood for construction work. Certain grades should be used for specific purposes, and branding would aid in proper specification and the employment of the correct grades. Timber as a construction material—particularly in a country such as the United States, where three-fourths of the new dwellings erected each year were timber-built—had inherent qualities of service and economy. It was the strongest material for its weight known for buildings, and was easily worked and handled. Fire resistance in buildings was not so much a matter of what materials were used in their construction, as of contents and design. Timber had a higher degree of fire resistance in floors than any other unprotected construction unit, because it did not deform under heat. That was one reason why a building of heavy timber construction, equipped with sprinklers, would carry a low insurance rate. Another point was that alleged "permanency" in construction was not always as desirable as it would appear on the surface. Industrial plants frequently found it profitable to make changes in their structures that proved prohibitive in some types of construction. Unless the changes could be made readily and economically the plant must operate under a handicap. Additional quarters might be needed in a short time by a manufacturer. Types of construction that were delayed by climatic conditions or demanded delay for erection often meant a great loss to the owner. Commercial structures frequently were left behind by the development of cities, and must be occupied by concerns requiring structural changes; or, if built in the path of expansion, they might have to be destroyed entirely. Some types of construction cost as much to destroy as to erect, and there was no salvage.

The Secretary of the National Building Officials' Conference, Mr. J. F. Downey, expressed the view that the creation of these timber standards was one of the most progressive steps ever taken by the lumber industry. From the position he held, the building inspector could have but one thought in his mind, and that was, "What was best for the safety of the public?" With this thought before him he could readily accept the standards as adopted, for in their application to building construction he might be sure that definite working stresses might be attached to structural grades and that the material would perform according to the design. If the building inspector felt that the work of educating the public lay solely in the hands of the lumber industry, progress would be slow. If, however, he would point out to the architect, constructional engineer, and builder what lay ready to hand to use a great force would be set in motion to bring about lower costs, for these standards had been formulated largely with the idea of eliminating waste in the lumber trade which, if accomplished, must reflect itself in the lower cost of material.

Rating and Valuation Committee.

The Minister of Health has appointed a Committee consisting of the Right Hon. Edward Shortt, K.C. (chairman), and Messrs. Arthur Body, F.S.I., W. Craig Henderson, K.C., W. H. Patchell, M.Inst.C.E., and A. H. Preece, M.Inst.C.E., to prepare a statement in accordance with the provisions of section 24 of the Rating and Valuation Act, 1925, setting out in detail all machinery and plant which appears to them to fall within any of the classes specified in the Third Schedule to the Act. All communications to the Committee should be addressed to the Secretary, Mr. A. N. Rucker, Ministry of Health, Whitehall, S.W.1.

DOMESTIC HOT WATER SUPPLY

IN the course of a paper on this subject, given before the Associate Section of the Edinburgh Architectural Association, on January 11, Mr. T. M. Halliday said by the term "hot water" he meant water at a temperature of 120 deg. to 160 deg., which was quite hot enough for ordinary domestic requirements. A lower temperature than 120 deg. was required for baths, but the general demand was for small quantities of water, which could be obtained quickly, at a much higher temperature, and which were available directly the tap was opened. A hot-water apparatus should be made as simple as possible; it should have no unnecessary piping or quick bends, as all piping, and especially bends, meant friction, which was power lost.

Another point to keep in mind was that when the water was heated the heat should not be wasted. By this he referred especially to the loss of heat by radiation. This was greater than most people thought, judging from the way in which hot-water supply pipes were often fitted up. For example, if we took a tank of 30 gall. capacity, the water being at a temperature of 156 deg. when the surrounding air was, say, 67 deg., a difference of 89 deg., the loss of heat units by radiation would be equivalent to something like 1 lb. of coal consumed in two and three-eighth hours, which was a big item when taken over a year.

In reckoning the loss of heat by radiation he only took the tank into consideration, as being more easily calculated, but the loss from this cause was far greater, in proportion to the exposed surface in the pipes, especially the vertical sections. The chases, or recesses, in which they were fixed acted as flues, up which the air passed with considerable velocity. If no covering was used on the pipes the recesses should be made practically air-tight, and the communications between the different floors stopped, so that the least possible movement of air about the pipes should take place. There was no better non-conductor of heat than a body of quiescent air. The tank or cylinder should be covered with a boiler composition, so that it would retain its heat, thus ensuring a fair amount of warm water in the morning, although the fire had been off all night.

In mansions and residential houses the boiler should always have 25 per cent. increased heating capacity. This margin allowed for a sudden and unexpected demand for extra hot water, and also allowed for bad and irregular stoking.

The cold feed pipe was often put in too small a diameter; it should always be at least ½ in. larger than the secondary flow pipe.

It was the old practice to take the cold feed direct into the boiler, and this was sometimes still done by some fitters. This was bad practice for the following reasons: First, when a hot-water tap was opened the inrush of cold water to the boiler caused too quick a change of temperature, and had been known to cause the boiler to fracture; second, it caused the boiler to take on a deposit quickly, and if there was lime in the water the deposit gathered quickly; third, it was a waste of unnecessary piping.

The proper place to connect the cold feed was to the storage cylinder, about 4 in. from the bottom. It was usually fitted with a spreader, which distributed the incoming jet of water over the bottom of the cylinder, so taking the chill off the cold water before it reached the boiler and reduced the temperature in the boiler gradually.

In laying out a hot-water circulation it should always be remembered to carry the hot water direct to the highest point of circulation, with as little piping as possible. It could then be distributed in any way into the return pipes. This was called the "return," or "drop" system, and was the most satisfactory in practice. When a branch circuit was taken from the rising flow pipe it was quite common for the hot water to miss it altogether, but it would never miss a circuit if taken off the

return, or drop system. An important point in any hot-water apparatus was the expansion pipe and the height it should be kept at its highest point above the water level of the cold water storage cistern.

Hot water expanded about ½ in. to the foot, hence the rule for fixing the expansion pipe above the water line in the cold storage cistern was ½ in. to the foot, according to the height it stood above the boiler. It was not always correct to say that the boiling point of water was 212 deg. It depended upon the pressure. On top of a mountain water would boil at considerably less than 212 deg., while at the bottom of an apparatus 35 ft. high, it would not boil until a temperature higher than 212 deg. was reached.

Taking an ordinary apparatus with the storage cistern 35 ft. above the boiler, there would be a pressure on the boiler of about 15 lbs. per sq. in., and the water in the boiler would not boil until a temperature of from 244 deg. to 250 deg. had been reached. Water which had been prevented from boiling at 212 deg., owing to the head or pressure above it, continued to expand with the increase of temperature to which it was being subjected. The water would expand considerably more than ½ in. per ft. of head of the apparatus. This was the reason why, in practice, an expansion pipe kept to the height given by the above rule would be found to be too low.

Taking an apparatus 48 ft. high, and a 60 gallon cylinder, when the water in the boiler and cylinder was heated to near boiling point, which, in this case, would be somewhere about 250 deg., the total expansion would be 2½ gallons of water. The height being 48 ft. the water in the expansion pipe would stand 2 ft. above the water level of that in the cold water storage cistern. Now if the internal diameter of the expansion pipe be 1 in., the 2 ft. would contain fully half a pint of water. Therefore, the rest of the expanded water must find its way back into the storage cistern, raising the level of water 1 in. or thereby, if the cistern was 3 ft. long by 2 ft. broad. This calculation, of course, was based on the assumption that the water was at boiling point, but in a well regulated apparatus, it might be taken that the water was not often heated above 180 deg.

To illustrate what happened when the water reached boiling point, let it be supposed that the water in the boiler was, say, 220 deg., which was 8 deg. above boiling point, at ordinary atmospheric pressure. The water rose up the flow pipe by reason of the heavier column in the return pipe until it arrived at a point where the pressure, or head, was not sufficient to keep it in its liquid form. It then burst into steam, throwing out all the water in the expansion pipe above this point. Then the water below, being suddenly relieved of the pressure, also burst into steam, which went on blowing off until sufficient cold water has entered the boiler to reduce the temperature below boiling point.

Considering the materials used in the construction of a domestic hot water apparatus, the speaker said the boilers were made of cast iron, wrought iron, cast semi-steel, or copper, depending, for the most part, on the kind of water to be had in the district. Where the water was soft the boiler, if made of wrought iron, should be treated by the bower barffing process, as soft water had a corrosive action on wrought iron. This treatment had been used in districts where the water was soft and had been found to be satisfactory. In some parts of the country the action was so severe that nothing but copper would stand it. In some districts the water contained large quantities of lime in solution and when cold water was admitted into the apparatus the sediment was deposited in the inside of the boiler water way and, if allowed to remain for any length of time, would prevent the water from absorbing the heat from the fuel, with the result that the boiler plates became overheated and, in time, fractured.

With reference to the metals used in the piping of hot water apparatus, the speaker said that lead pipes, although they had a smooth internal bore, were not suited for hot water owing to the great and continual expansion which took place, with the result that they weakened and soon broke, requiring continual repairing. Galvanised iron pipes were commonly made with their surfaces rough, which encouraged the deposition of scale from so-called hard water and rendered its removal difficult. This was the objection to using iron pipes where the water was hard and contained lime. Where the water was soft and came off moorland, it attacked galvanised iron pipes with disastrous results.

The ideal metal for hot water pipes was copper. It was smooth in the internal bore and was not liable to corrode in the same way as galvanised iron, and it would stand all expansions and contractions. Now that light gauge copper pipes were so much used, the expense of installing a copper pipe system was not great. When fitting up a system it was a mistake to mix copper and galvanised iron piping, as the two metals did not agree and electrolytic action set in, with the result that the galvanised iron soon rusted up, and the pipes quickly became choked. As a cubic inch of iron became 50 cubic inches of wet rust, it would be seen how soon a pipe might become completely blocked. It was, however, just as annoying when rust came out with the water, turning it red. Where the two metals were used together some authorities advocated a vulcanite washer or connection between them, but as water was a good conductor, this, in his opinion, was not much use, and should never be done.

RENT RESTRICTION: LANDLORDS, TENANTS AND SUB-TENANTS

The recent case Catto *v.* Curry (*Weekly Notes*, January 23) raised a point of importance which should be noted. The respondent was the tenant of premises which were within the Rent Restriction Acts, and in 1921 he had sublet to one Castle two rooms on the ground floor and a bedroom on the first floor at a weekly rent of 26s. 6d. At the end of January, 1924, Castle gave up possession of these rooms, and then the respondent had carried out certain repairs, no one occupying these rooms, except the workmen executing the repairs, which occupied a week or ten days. The respondent then in February had sublet the rooms to the appellant, in this case at a weekly rent of 25s.

On June 25, 1925, the appellant had taken out a summons for apportionment of the rent of the premises on the rent of August, 1914, and the registrar had made an apportionment, but on appeal to the judge in the County Court this had been set aside on the ground that as the respondent's workmen were actually on the premises doing work for him as landlord, there was actual possession by the respondent, and under section 2 sub-section (1) of the Rent Act, 1923, the premises had become decontrolled. This judgment was, however, set aside by a Divisional Court.

The section is a complicated one. It provides, "Where the landlord of a dwelling-house to which the principal Act applies is in possession of the whole of the dwelling-house at the passing of this Act or comes into possession of the whole of the dwelling-house at any time after the passing of this Act, then from and after the passing of this Act or from and after the date when the landlord subsequently came into possession, as the case may be, the principal Act shall cease to apply to the dwelling-house. Provided that where part of a dwelling-house to which the principal Act applies is lawfully sublet and the part so sublet is also a dwelling-house to which the principal Act applies, the principal Act shall not cease to apply to the part so sublet by reason of the tenant being in or coming into possession of that part, and if the landlord is in, or comes into, possession of any part not so sublet the principal Act shall cease to apply to that part notwithstanding that a sub-tenant continues in or retains possession of any other part by virtue of the principal Act."

The Divisional Court held that the proviso just set out contemplated three different parties with an interest in the dwelling-house, or part of it, viz., the landlord, the tenant and the sub-tenant; the tenant here meaning the mesne tenant as distinct from the landlord on the one hand and the sub-tenant on the other, and that where a part of a dwelling-house to which the Act of 1920 applies is lawfully sublet and the part so sublet is also a dwelling-house to which that Act applies—both of which conditions were satisfied in this case—the Act does not cease to apply to the sublet part of the premises on the mesne tenant's coming into possession of that part.

Mr. Justice Talbot said that the proviso had been enacted to prevent the injustice of control remaining between landlord and tenant while the tenant was at liberty without restriction to impose what terms he liked on a sub-tenant. Its plain meaning was that the provisions of the first portion of subsection (1) of section 2 of the Act of 1923 were not to apply, and that the principal Act was not to cease to apply, where the tenant as distinct from the landlord came into possession of a dwelling-house or part of a dwelling-house which had been sublet.

The case appears distinguishable from that of Dunbar *v.* Smith, noted by us December 25, 1923, and now reported *Weekly Notes*, January 16, 1924. In that case, in the first place, it was pointed out that there could be no apportionment because the floor in question had been a separate dwelling-house with a standard rent of its own before August, 1914. This point is not referred to in the *Weekly Notes*, but appeared in the report in *The Times*, December 15.

In the second place the person claiming possession in that case was treated as the "landlord" apparently, and the case was decided on that basis; the Court in that case pointed out that the proviso to the subsection related to the case of part of a house being sublet by the tenant," a condition of things different from the case before it, but which, it may be observed, was the case here.

In neither case does the short report state the nature of the tenure of the tenant claiming decontrol as "landlord"; but supposing the tenant to be the holder of a long lease say, for 99 years, who has sublet to a sub-tenant who in turn has sublet portion of the premises, what would be the position then? This point was considered, but not decided in Jenkinson *v.* Wright (*The Builder*, October 31, 1924), and Lord Darling, sitting as a member of a Divisional Court, intimated that it could hardly be contended that a person who was a leaseholder could not claim decontrol under section 2 subsection (1) of the Act of 1923, for the same argument would apply in the case of a lease for 999 years.

The definition of the word "landlord" in section 12 of the principal Act does not offer much assistance. In paragraph (*f*) the term is said to include "Any person from time to time deriving title under the original landlord," but paragraph (*g*) supports the finding in Catto's case, for it provides "The expression 'landlord' also includes in relation to any dwelling-house any person, other than the tenant, who is or would but for this Act be entitled to possession of the dwelling-house."

Possibly when the two cases above mentioned are fully reported light may be thrown on this point.

Cardiff Municipal Schemes.

The Cardiff Town Council proposes to build new offices for the tramways department and new offices and showrooms for the electricity department in Frederick-street, at an estimated cost of £75,500. The scheme involves the construction of a new road and a new bridge across the canal at the back of the fish market, and the demolition of 35 cottages.

COVENTRY BUILDERS' DINNER

MR. ALFRED CLARKE, president of the Coventry and District Association of Building Trades' Employers, speaking in support of the toast of "The National and Midland Federation," at the annual dinner of the Association on the 5th inst., said in his opinion the vital problem of the industry was that of apprenticeship. As employers they had undoubtedly neglected their duties in the past in this respect. Their Federation had been trying to force builders to do something, and they had received a little concession from the Unions. They could now take one apprentice to every three skilled men, in lieu of one to every five as heretofore, but this only applied to assisted housing schemes. They did not ask those contractors who could take on such lads to do so. In Coventry a large number of their skilled men were employed by outside firms—engineering concerns and city authorities—for maintenance work. The Federation asked these men to take their quota of apprentices. If half their skilled men were employed by firms outside their control and the proper quota of apprentices were not taken on, the shortage of men in their industry would last for a long time.

Mr. S. Guy Sapcote (President of the Midland Federation), in responding, said the National Federation was largely engaged upon the eternal question of wages and conditions agreements. He felt sure it would not be long before they could come before their members with a new agreement which, he hoped, would please all parties. To ensure stability in the question of wages and conditions was what they had to aim at, and which they had to attempt to formulate for the benefit of the general public. He was glad to learn they had now some five hundred apprentices to the bricklaying craft training in the Midland area. The public did not realise that the building trade trained a large number of craftsmen who were absorbed in other industries.

BRISTOL BUILDING TRADES' DINNER

THE annual dinner of the Bristol Association of Building Trades' Employers was held recently at the Royal Hotel, the President, Mr. W. S. We ks, occupying the chair. The guests included Mr. Norman Wills, President Bristol Chamber of Commerce; Alderman C. H. Long, President South-Western Federation; Mr. W. H. Nicholls; Mr. G. S. Gordon Hake, F.R.I.B.A., Hon. Secretary Bristol Society of Architects; Mr. J. L. Parfitt, President Bristol Association of Saw Mills Proprietors; Mr. R. A. Wilkins, President Bristol Master Plumbers' Association; Mr. W. H. Townsend, Bristol Clerks of Works and Builders' Foremen's Association; Mr. W. H. Sleep, President Weston-super-Mare Builders' Association; Mr. A. W. Walters, Bristol, Vice-president; and Mr. Conrad K. Cowlin, the incoming President.

Mr. W. H. Nicholls proposed the toast of "The City and Port of Bristol; and Mr. Norman Wills, responding, said since the last dinner they had had the magnificent buildings of the University opened. Those buildings showed that they had a great architect and great craftsmen in Bristol. In the future he hoped to see other big buildings in the city, including a fine block of municipal buildings.

The toast of "The National and South-Western Federation of Building Trades' Employers" was proposed by Mr. W. G. Lambert.

Alderman C. H. Long, President of the South-Western Federation, in response, said the National Federation was doing good work for the builders. What stood out prominently was the endeavour to bring into operation a standard method of measurement for quantities. They were also trying to get a proper form of contract between themselves and the architects.

Mr. W. F. Long proposed "The Bristol Association," and said that those who were in the Association knew full well the great benefits that they obtained for themselves and for the uplifting of their trade.

Mr. W. S. Weeks, responding, referred to the loyal support he had received during the last two years. He then, on behalf of the Association, presented Mr. E. I. Neall with a silver tray in recognition of his services to the organisation.

In acknowledging the gift, Mr. Neall said he would treasure it for the good feeling it conveyed to him from his fellow-builders, with whom he had been associated during the past 35 years.

SHORT COURSES OF INSTRUCTION FOR TEACHERS IN TECHNICAL, &c., SCHOOLS

THE Board of Education is making arrangements for the following short courses of instruction to be held in the summer of 1926 for teachers in recognised technical schools, schools of art, junior technical schools, evening schools, &c., in England and Wales:—

(1) Engineering Science, at Oxford.
(2) Electrical Engineering, at Oxford.
(3) Building Subjects, in London, viz., A, Building Subjects; B, Building Science; C, Surveying; D, Painting and Decorating.
(4) Textile Subjects, in London; and others.

Teachers who desire to attend any of these courses must make application to the Board of Education on Form 106c. U. as soon as possible, and in any case before March 26.

The courses A., B., C., D. for teachers in technical schools and schools of art will be held in London during the period Monday, July 19, to Friday, July 30.

The programme of the courses includes a series of regular lectures accompanied by practical work, demonstrations, or tutorial discussions, the morning period from 9.30 a.m. to 12.30 p.m. being usually set aside for this purpose. Arrangements will be made, when necessary, for design or practice work to be continued for the whole or part of the afternoon periods. Monday, July 19, will be set aside for conferences between teachers, lecturers, and H.M. Inspectors of Technical and Art Schools.

Afternoons or evenings will be devoted to:—(*a*) Short lectures by eminent specialists; (*b*) discussions on teaching methods; (*c*) visits to places of interest (*e.g.*, schools, museums, and important London building works).

It is expected that conferences on professional subjects in relation to the teaching of building will be held with the Royal Institute of British Architects, the Institute of Builders, the National Joint Education Committee for Painting and Decorating, and other organisations.

A detailed programme of the courses will be sent to all applicants selected to attend. Further inquiries regarding the courses may be addressed to Mr. Hugh Davies, H.M.I., 24, Old Queen-street, London, S.W.1.

Through the kindness of the authorities of the Westminster Training College, Horseferry-road, London, S.W.1, hostel accommodation will be obtainable at the College, with separate bedrooms, use of social rooms, tennis courts, &c., at an inclusive charge of £2 10s. per head per week.

The lecturers will include Mr. W. R. Jaggard, F.R.I.B.A., Mr. F. E. Drury, M.Sc. (Tech.), Mr. T. P. Bennett, F.R.I.B.A., Mr. L. Allen Gerrard, F.I.O.B., Mr. A. Everett, B.Sc., Mr. A. E. Holbrow, A.R.I.B.A., Mr. H. Davis Richter, R.I., R.O.I., Mr. A. R. H. Jackson, A.R.C.A., and Mr. Leonard Drinkwater.

THE "SLUMP" TEST FOR CONCRETE

A FIELD test for the consistency of concrete has been developed in the United States, and is now being fairly extensively used there. It is also coming into more general use in this country. The only apparatus needed for this test is a sheet-metal truncated-cone-shape mould, 12 in. high, 8 in. diameter at the base and 4 in. diameter at the top, provided with handles at the sides, and a $\frac{5}{8}$ in. pointed metal rod 1 ft. long. The mould is filled with concrete in layers of 4 in. at a time, each layer being punned exactly thirty times with the metal rod. After the third, and last, layer has been punned the mould is lifted off. Owing to the wetness of the concrete the exact cone shape will not be retained—the heap will settle, and it is the extent to which the material settles immediately the mould is removed that indicates the consistency. It will be realised that the wetter the concrete the more it will settle, or "slump," and the settlement is calculated in terms of inches. The total height of the mould is, as stated, 12 in., and if, after the mould is removed, the top of the heap of concrete has settled to 10 in., the slump is 2 in.

The following slumps are recommended for various classes of concrete:—

	Maximum slump in inches.
Mass concrete	2
Reinforced concrete:—	
Thin vertical sections	6
Heavy sections	2
Thin confined horizontal sections	8
Roads and pavements:—	
Hand finished	4
Machine finished	1
Mortar for floor finish	2

It will be seen that it is of the utmost importance to prevent the amount of settlement of the concrete being affected by vibration. Even the movement of the workmen's feet on the platform on which the test is made will shake the heap flatter than it should be, and the mould must be removed with the greatest care in order that no part of the test piece shall be pushed over. If possible it is preferable to make the test on a firm table or bench.

If the test shows that the concrete is not of the correct consistency according to the above table more or less water should be used until the correct slump is obtained. It will be found that an increase of 10 per cent. of water will increase the slump by about 3½ inches, and *vice versa* if less water be used.

THE ACTIVATED SLUDGE PROCESS OF SEWAGE TREATMENT

IN the course of a Chadwick Public Lecture on this subject, given in the Lecture Hall of the Institution of Civil Engineers, on February 26 (Sir Matthew G. Wallace, Bart., in the chair), Dr. H. T. Calvert, of the Ministry of Health, said no aspect of the sewage purification problem had been so much discussed since the war as the activated sludge process of sewage treatment. He explained how the process had been developed from the older methods, including land irrigation and treatment in contact beds or percolating filters, how activated sludge is obtained from the sewage itself by means of æration, and how the activated sludge is then used for the purification of further quantities of sewage. Various methods of applying the process had been invented. These were described in more or less detail, and it was explained that they all aimed at oxidising the organic matter of sewage, by means of air and micro-organisms, in the most efficient manner, and at the lowest possible cost. The lecturer dealt with the general principles underlying the process, and described a modification of it which, he said, had been introduced at Birmingham and promised to be of wider application. The higher manurial value of activated sludge as compared with ordinary sludge was referred to, but the difficulty in removing the water which adhered to the sludge would, no doubt, said the lecturer, in many cases stand in the way of a general adoption of the process and a full utilisation of activated sludge as a manure.

The lecturer said that the capital expenditure to which local authorities in this country were already committed for applying the activated sludge process amounted to approximately one million pounds sterling, and a large amount had already been spent on the process in America. Finally, attention was drawn to the general ignorance concerning the new process, and a plea was put forth for more extended scientific investigations with a view to furnishing the necessary information for the design of further works.

NEW BUILDINGS IN LONDON

Acton.—On a site adjoining Acton Town Tube Station, W., with a frontage of 150 ft., shops and flats are to be built. Messrs. Richard Ellis & Son, surveyors, 45, Fenchurch-street, E.C. 3.

Bishopsgate.—Messrs. B. Goodman, Ltd., Haggerston-road, E., have in hand the demolition of the corner block in Bishopsgate and Houndsditch, E.C. 3, upon the site of which the Northern Estates Co., Ltd., propose to erect extensive shop and office premises. Messrs. Richardson & Gill, architects, 41, Russell-square, W.C. 1.

Bloomsbury.—Alterations and additions are being made to the branch premises in Bedford-row, W.C., of the Midland Bank, Ltd. Messrs. W. H. Lorden & Son, Ltd., builders, 107, Trinity-road, Wandsworth, S.W. 17. Messrs. Whinney, Son & Austen Hall, architects, 8, Old Jewry, E.C. 2.

Cannon-street.—The office building at No. 103, Cannon-street, E.C. 4, has been purchased by the City of London Real Property Co., Ltd., of 159, Fenchurch-street, E.C. 3, and developments are projected.

Cheapside.—No. 73, Cheapside, E.C., has been acquired by Messrs. The Oxford Cabinet Co., 14, Artillery-row, Westminster, S.W.1, for a City showroom after necessary alterations.

Chelsea.—Work has commenced upon the scheme for converting the old Crosby Hall, in Cheyne-walk and Danvers-road, S.W. 3, into a hostel for women, including the building of a residential wing, for the British Federation of University Women. Messrs. Dove Bros., Ltd., builders, Cloudesley-place, Islington, N. 1. Messrs. Wratten & Godfrey, architects, 18, Queen Anne's-gate, Westminster, S.W. 1.

City.—The premises of the G.P.O. in Queen Victoria-street, E.C.4, are to be extended to plans of H.M. Office of Works, Storey's-gate, Westminster, S.W. 1. Messrs. Leslie & Co., Ltd., builders, Kensington-square, W. Messrs. Archibald D. Dawnay & Son, Ltd., steelwork, Steelworks-road, Battersea, S.W. 8.

Covent Garden.—A new office building is to be erected in Drury-lane, W.C. 2, consisting of basement and six floors, at a cost of about £14,500. Messrs. F. G. Minter, Ltd., builders, Ferry Works, Putney, S.W. Messrs. Emden, Egan & Co., architects, 7, Garrick-street, W.C.2.

Dulwich.—Nine shops with flats above are to be built in Lordship-lane, S.E., at a cost of about £10,500. Messrs. Wilson, Lovatt & Sons, Ltd., builders, Abbey House, Victoria-street, Westminster, S.W. 1. Mr. G. Topham Forrest, F.R.I.B.A., architect, County Hall, Westminster, S.E. 1.

East Sheen.—Groups IV and V of the Barker Estate, Upper Richmond-road, East Sheen, comprising 57 varying types of houses, are now in progress with new roads and sewers being formed at other parts of the estate in preparation for the later groups. New private garage works and Group VI are now under preparation. Messrs. George Heath, 415, Battersea Park-road, are contractors for the work, and Messrs. Wheeler & Co., of 14, New Kent-road, S.E.1, are completing roads and sewers. The whole of the work is under the superintendence and control of Mr. Sydney E. Castle, F.R.I.B.A., 40, Albemarle-street, Piccadilly, W.1.

Gower-street.—A large frontage in Gower-street, W. 1, is to be pulled down and rebuilt, new shops and showrooms being projected. Messrs. Maple & Co., Ltd., builders, Tottenham Court-road, W.

Harlesden.—The General Hospital in Harlesden-road, N.W., is to be considerably enlarged. Messrs. G. Godson & Son, builders, 215, Kilburn-lane, W. 10. Messrs. Greenaway & Newberry, architects, Parliament Mansions, Victoria-street, S.W. 1.

Hammersmith.—Alterations and improvements are to be made to the shops and showrooms at 52, King's-street, Hammersmith, W., of Messrs. James Hunt & Co., drapers and house furnishers. Messrs. Charles Spreechley & Co., Ltd., builders, 21, Phœnix-place, W.C. 1.

High Holborn.—Negotiations are proceeding for the disposal of a corner building site of nearly 2,000 square feet, with a view to the erection of new premises. Messrs. Hillier, Parker, May & Rowden, surveyors, 27, Maddox-street, W. 1.

Ilford.—Mr. P. A. Bayman, "Clovelly," Blake Hall-crescent, E. 11, proposes to erect high-class residences of various types on part of the Ilford Housing Estate.

Islington.—Plans have been prepared by Mr. P. Morley Horder, F.R.I.B.A., 5, Arlington-street, S.W. 1, for additional buildings at the St. Mark's Hospital, City-road, E.C. The cost is estimated at about £15,000.

Islington.—The Islington Borough Council are considering the question of building a new public hall in the borough. Mr. E. C. P. Monson, F.R.I.B.A., Finsbury-pavement House, Moorgate, E.C. 2. Large additions are at present being made to the Town Hall, under contract with Mr. George Bollom, builder, 1A, Essex-road, Acton, W. 3.

Islington.—The Manor Gardens Estate Co., Ltd., of 548, Holloway-road, Islington, N. 7, have purchased the freehold land and buildings, Nos. 556, 560 & 562, Holloway-road, N. 7, with a view to development.

Islington.—The "Golden Lion" public house is to be rebuilt and extended by its owners Messrs. Whitbread & Co., Ltd., brewers, Chiswell-street, E.C. 1, to the plans of their architect.

Leonard's-place.—Messrs. Ford & Walton, Ltd., builders, 254, High-road, N.W. 6, are to carry out the contract for the rebuilding of the branch premises at Nos. 15-16, Leonard's-place, Kensington High-street, W., referred to in *The Builder* on February 26. Demolition and excavations are now in hand. Messrs. Whinney, Son & Austen Hall, architects, 8, Old Jewry, E.C. 2.

Leyton.—The Wanstead and Leyton General Hospital, in Orford-road, E. 7, is being extended at a cost of £30,000. Mr. F. J. Coxhead, builder, 45, Bulmer-road, E. 11. Messrs. Waggett & Bradford, quantity surveyors, 12, Regent-street, W. 1. Messrs. J. Andrew Minty & Sons, architects, 35, Craven-street, Strand, W.C. 2.

Ludgate-hill.—Extensive structural alterations are to be made to the Blackfriars Station, E.C., of the Southern Railway Co. Messrs. L. & W. Whitehead, Ltd., builders, Portland Works, Portland-place North, S.W. 8. Messrs. Joseph Westwood & Co., Ltd., steelwork, Millwall, E.14. Plans by company's engineers, Waterloo Station, S.E. 1.

Marylebone.—The annual meeting of the governors of the Elizabeth Garrett Anderson Hospital for Women, in Euston-road, N.W. 1, is to be held on the 15th inst., when a statement will be made as to the position of the scheme for the building of large additions to the institution, at a cost of over £100,000. Sir Brumwell Thomas, hon. architect, 53, The Albany, Piccadilly, W. 1.

Marylebone.—The premises of Messrs. Shand, Kidd & Co., in Highgate-road, N.W., are being reconstructed and enlarged, to the plans of Mr. Andrew Mather, architect, 38, John-street, Bedford-row, W.C. Messrs. Dove Bros., Ltd., builders, Cloudesley-place, Islington, N. 1.

Mortlake.—An application has been made for sanction to carry out alterations and improvements to the Railway Hotel public-house, at the corner of Roehampton-lane and Barnes Common. Mr. M. T. Saunders, architect to the owners, Messrs. Watney, Combe, Reid & Co., Ltd., brewers.

Oxford-street.—Large shops and offices are among the alterations to be effected at 12-14, Argyll-street, W.1. Mr. J. A. Phillips, surveyor, 24, Pall Mall, S.W. 1.

Piccadilly.—A new branch bank is to be established by the National Provincial & Union Bank of England, Ltd., in part of the new building in Berkeley-street, W.1, now being erected by Messrs. Holland & Hannen and Cubitts, Ltd., 256, Gray's Inn-road, W.C., for Messrs. Cook & Son, tourists' agents. Mr. F. C. R. Palmer, F.R.I.B.A., Bank's architect.

Regent-street.—A large site in Regent-street, Warwick-street, and Glasshouse-street, W.1, is now being cleared of old buildings by Messrs. H. Sabey & Co., Ltd., Paddington, W.2, preparatory to the erection of a new office and shop building. Messrs. North, Robin & Wilsdon, F.R.I.B.A., architects, 35–39, Maddox-street, W.1.

Regent-street.—No. 88, Regent-street, W.1, with an area of 4,816 sq. ft., is to be let on lease for the building of shops, showrooms and offices. Mr. John Murray, F.S.I., surveyor, 11, Suffolk-street, Pall Mall, S.W.1.

Roehampton.—An estate development scheme is being carried out on the Dover Park estate, S.W., where Messrs. William Willett, Ltd., builders, Sloane-square, S.W.1, are prepared to build houses of varying sizes and types for sale from £2,750 upwards.

Southfields.—A large housing scheme is to be carried out at Southfields, S.W., to plans by Messrs. G. T. & H. B. Elkington, architects, 7, Laurence Pountney Hill, Cannon-street E.C.4.

Snow Hill.—The new police station in Snow Hill, E.C., is to cost nearly £100,000. Messrs. John Mowlem & Co., Ltd., builders, Ebury Bridge-road, Westminster, S.W.1. Plans by City Architect's Department, Guildhall, E.C.2.

Temple-avenue.—The Argus Press, Ltd., have decided to extend their plant and buildings in Temple-avenue, E.C.4, and Stoney-lane, E.1.

Tottenham.—A row of shop property, consisting of 26 single-fronted shops with flats above, is to be erected in White Hart-lane, N. Mr. E. C. P. Monson, F.R.I.B.A., architect, Finsbury Pavement House, Moorgate, E.C.2.

Vauxhall Bridge-road.—Plans have been sanctioned for the erection of new bank and office premises at the junction of Vauxhall Bridge-road and Chorton-road, S.W.1. Messrs. Lander, Bedells & Crompton, 6, John-street, Bedford-row, W.C.

Victoria.—It is suggested that a block of shops and flats should be erected at Nos. 232–242, Vauxhall Bridge-road, S.W.1, as a development of this site, which covers nearly 5,000 sq. ft. Messrs. Hillier, Parker, May & Rowden, surveyors, 27, Maddox-street, W.1.

Westbourne-grove.—Mr. George Bollom, builder, 1A, Essex-road, Acton, W.3, is extending a portion of the premises of Messrs. Bradley's (Chepstow-place), Ltd., drapers.

Westminster.—Messrs. George Trollope & Sons, surveyors and estate agents, 45, Parliament-street, Whitehall, S.W.1, are the agents for the development of a site of 28,000 sq. ft. near St. James' Park Station and Victoria-street, S.W.1, upon which it is proposed to build new premises.

Woolwich.—Plans have been prepared by the War Office for the erection of new buildings at the Royal Arsenal, S.E. Messrs. John Mowlem & Co., Ltd., builders, Ebury Bridge-road, Westminster, S.W.1, have secured the contract for foundations.

Steel House Dispute.

The Building Trades Federation, at a conference on the steel houses dispute in Glasgow, appointed a national committee with power to take action at any time in any locality without further consulting the union executives in carrying out the general policy of maintaining the claim that the building trade rate on all houses in Great Britain must be paid. The general secretary stated that it was now a dispute with the Government, not with Messrs. Weir.

ISLE OF THANET BUILDERS' ASSOCIATION

THE Isle of Thanet Master Builders' and Decorators' Association held their eighth annual dinner at St. George's Hotel, Margate, Mr. George M. Willis, A.I.O.B., President, occupying the chair.

Among those present were Messrs. T. D. Wood, A. W. Larkin, G. A. Hotter, H. H. Stockley, H. J. Bines, E. R. Dunn, R. E. Elliott, W. R. Roots, J. W. Scarlett, W. R. H. Gardner and L. H. Snowden.

After the loyal toast had been honoured, Mr. G. A. Hotter, Secretary of the Southern Counties Federation, proposed the toast of "The Isle of Thanet Master Builders' and Decorators' Association." Speaking of the relations between architects and builders, he said that the new conditions of contract contained certain clauses which were detrimental to builders, and the National Federation were taking the matter up to see if they could be amended, They suggested that they should be brought into form with the R.I.B.A. form of 1925.

The President, responding to the toast, said he felt that it was not more the business of the builder to invest his capital in erecting houses than any other section of the community; the question of housing was a national problem and they as citizens would do their share. Mr. Hotter urged those present to take apprentices, for in them lay the salvation of the industry. Speaking of other matters, he said that so far the Margate Corporation had not allowed the seashore sand for building—an objection he hoped would be removed.

"The Architects" was proposed by Mr. S. H. Head, A.I.O.B., who said that a better understanding existed between architects and builders than of old. They were colleagues for the betterment of the trade.

Mr. Gardner, housing officer to the Margate Corporation, responding, said that where possible the Corporation had adopted the lines laid down by the Association, but the Ministry of Health had interfered.

Mr. S. Austin proposed the toast of "The Visitors."

The Mayor, in replying, thanked the Association for their hospitality, but said that as regards the sand, it was not worth spoiling the amenities and, in any case, was not sea-sand a bad aggregate?

The health was drunk of Alderman A. W. Larkin, who had spent twenty-five years on the Ramsgate Corporation, and during that time had done much for the good of the town.

A STAFF SOCIAL

MESSRS. TROLLOPE & COLLS, LTD., held their seventh united social evening on Saturday, March 6, at Bermondsey Town Hall, when the cordiality of the relationship between the firm and their employees was manifest. There were 900 employees and friends present. Mr. Archie B. H. Colls presided, and was supported by Mrs. Colls, Mr. and Mrs. Fabian Trollope, Mr. Christopher Trollope, and Mr. Clifford Trollope.

Mr. Colls addressed the company during the evening, and Miss Samuels, a daughter of one of the employees, presented Mrs. Colls with a bouquet from the employees of the firm. The Hon. Secretary then briefly responded to the Chairman's speech.

Credit for the success of the evening is due to Mr. Clifford Trollope (chairman) and Messrs. R. Hurst, E. Burlington, C. H. Freaker, A. J. Haughton, A. C. Curtis, C. N. Davy, W. Tennet, and E. Taylor, who comprised the committee. Mr. J. W. Horswell carried out the secretarial work. The artistes and the dance orchestra were provided exclusively by employees of the firm.

Downham Housing Site.

The L.C.C. proposes to erect 2,178 houses and flats on the Bromley-road section of their Downham housing estate at an estimated cost of £147,750.

RATES OF WAGES IN THE BUILDING TRADE

Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Accrington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Altrincham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ashton-under-Lyne	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barnsley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barrow-in-Furness	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barry	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bath	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bedford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Birkenhead	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/4
Birmingham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bishop Auckland	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Blackburn	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Blackpool	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bolton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bournemouth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bradford	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Brentwood	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bridgwater	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Brighton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bristol	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Burnley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Burton-on-Trent	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bury	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Cambridge	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cardiff	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Chatham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chelmsford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cheltenham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Chesterfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Coventry	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Crewe	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Darlington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Derby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Doncaster	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Dudley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Durham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
E. Glam. (Mon. Vall.)	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Eastbourne	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Exeter	1/7	1/7	1/7	1/7	1/7	1/7	1/6	1/2½
Folkestone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Gloucester	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Grantham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Grays	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/7½	1/3½
Grimsby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Great Yarmouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Guildford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Halifax	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Harrogate	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hartlepools	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hastings	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hereford	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Huddersfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hull	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ipswich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Lancaster	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Leamington Spa	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leeds	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Leicester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Lichfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Lincoln	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Liverpool	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/4
Llanelly	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
London { 12 m. radius	1/9½	1/9½	1/9½	1/9½	1/9½	1/9½	1/8½	1/4
London { 12-15 m. radius	1/9	1/9	1/9	1/9	1/9	1/9	1/8	1/3½
Loughborough	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1½
Luton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Maidstone	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/3½
Manchester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Mansfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Merthyr Tydfil	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Middlesbrough	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Newcastle-on-Tyne	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Newport, Mon.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Northampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Norwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Nottingham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Oakham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Oldham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Oxford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Plymouth	1/8	1/8	1/8	1/8	1/8	1/8	1/7	1/3½
Pontypridd	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Portsmouth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Preston	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Reading	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Rochdale	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Rochester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Rugby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
St. Albans	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
St. Helens	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Scarborough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Sheffield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Shrewsbury	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Southampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Southend-on-Sea	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southport	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
South Shields	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stockport	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stockton-on-Tees	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stoke-on-Trent	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stroud	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5	1/1½
Sunderland	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Swansea	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Swindon	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Taunton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Torquay	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Tunbridge Wells	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wakefield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Walsall	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Warrington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
West Bromwich	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Wigan	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Windsor	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wolverhampton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Worcester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
York	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½

(For rates of wages in the Building Trade in Scotland, see page 454.)

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in; the name and address at the end is the person from whom or place where quantities, forms of tender, &c., may be obtained.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

MARCH 15.—**Aberdare.**—LIGHTING.—Electric wiring of the new additions to the Workmen's Hall and Institute, Cwmbach, for the Committee. T. Roderick & Son, architects, Clifton-street.

MARCH 15.—**Belfast.**—HEATING.—Plumbing, sanitary and ventilating fittings, &c., for new buildings at Purdysburn Villa Colony, at the Mental Hospital, for the T.C. Tulloch & Fitzsimons, architects, 21, Castle-place, Belfast.

MARCH 15. — **Bucksburn.** — HEATING. — Heating system in the Newhills U.F. Church, for the Committee. J. Wood, Ugie Cottage, Burndale-road.

MARCH 15.—**Dublin.**—WIRING.—Electric wiring of 230 houses at Croydon Park, and 218 houses at Ascot-square, for the C.B. J. J. Murphy, Town Clerk. Deposit £1 1s.

MARCH 15.—**Felinfoel.**—HOUSES.—Forty houses for the Great Western (Llanelly) Garden Village Society, Ltd. T. Alwyn Lloyd, F.R.I.B.A., architect, 6, Cathedral-road, Cardiff. Deposit £2 2s.

MARCH 15.—**Gosforth.**—PAINTING.—The Mental Hospital, for the Committee of Visitors of the Newcastle upon-Tyne City Mental Hospital. Clerk and Steward.

MARCH 15. — **Hanwell.** — HOUSES. — Erection of 30 houses on the Hopefield estate, for the U.D.C. Council Surveyor's Office, Cherington-road, Hanwell, W.7.

MARCH 15.—**Hessle.**—SCHOOL.—Proposed school at Hessle for 320 scholars, for the East Riding C.C. County Architect County Hall, Beverley. Deposit £2 2s.

MARCH 15.—**Jedburgh.**—EXTENSION.—To the Grammar School, for the Roxburgh E.C. Reid & Forbes, architects, 7, Ainslie-place, Edinburgh.

MARCH 15.—**Lanark (Middle Ward).**—HOUSES.—Twenty-eight houses at Castle Chimmins-road, Lightburn, Cambuslang, for the D.C. of the C.C. P. C. Smith, Housing and Town-Planning Department, District Offices, Hamilton.

MARCH 15.—**London.**—PAINTING.—The Maternity and Child Welfare Centre, for the Bethnal Green B.C. Borough Surveyor, Town Hall, Bethnal Green, London, E.2.

MARCH 15.—**Marple.**—WORKS.—Provision, erection, and completion of new works required to be constructed at the Gasworks, Marple Bridge, as follows:—(1) New coal store, boiler-house, and chimney; and (2) steelwork, stanchions, girders, steel roofs, for the U.D.C. J. K. Law, Gas Engineer, Gasworks, Marple Bridge. Deposit £1 1s.

MARCH 15.—**Navan.**—HOUSES.—Six houses at Cox's Field, Abbeylands, An Uaimh, for the U.D.C. Peter Foley, Clerk, An Uaimh.

MARCH 15.—**Nottingham.**—DEMOLITION.—Pulling down and clearing away the Drill Hall, Castle-road, for the T.C. T. Wallis Gordon, City Engineer. Deposit 10s.

MARCH 15.—**Nottingham.**—PAINTING.—The suspension bridge over the River Trent, for the T.C. F. W. Davies, Engineer and General Manager, Water Offices, Castle-boulevard. Deposit £1 1s.

MARCH 15.—**Plymouth.**—LABORATORIES.—Laboratories at the College for the Governors of the Plymouth College. M. Alton Bazeley, F.R.I.B.A., architect. Deposit £3 3s.

MARCH 15. — **Prestwick.** — HOUSES. — Seventy-two houses at Glenburn and New Prestwick sites, for the T.C. Burgh Engineer. Deposit £1 1s.

MARCH 15.—**Tadcaster.**—PAINTING.—Outside painting of 350 houses at the Allerton Bywater, Kippax, Micklefield, Swillington, Sherburn, South Milford, and Tadcaster housing schemes, for the R.D.C. J. Taylor, Housing Inspector, 23, Park-avenue, Swillington, Woodlesford, near Leeds.

MARCH 15.—**Wakefield.**—DEMOLITION.—Of premises now used as central stores, Cliff-lane, for the West Riding C.C. West Riding Architect, County Hall.

MARCH 15.—**Westhoughton.**—HOUSES.—Twelve non-parlour type houses on the Hindley's estate, Wigan-road, for the U.D.C. Surveyor. Deposit £2 2s.

MARCH 15.—**Worsborough Vale.**—HALL.—Parish hall to be erected at Worsborough Dale. A. Whitaker, architect and surveyor, 18, Bank-street, Sheffield.

MARCH 16.—**Dublin.**—GATES.—Gates, entrances and boundary wall to St. Mary's Novitiate, Marino, for the C.B. J. J. Murphy, Town Clerk. Deposit £2 2s.

MARCH 16.—**Belfast.**—REPAIRS.—Limewashing, &c., of houses for the C.B. R. Meyer, Town Clerk.

MARCH 16.—**Brighton.**—SCREENS.—Sliding glazed screens to the balconies of the "D" 1 and "E" 1 Wards of the Poor Law Infirmaries, Elm-grove, for the B.G. E. Wallis Long, architect, 6, Old Steine.

MARCH 16.—**Hunslet.**—PAINTING.—Painting the houses on the housing estates:—86 houses at Woodlesford and 118 houses at Templenewsam, for the R.D.C. W. B. Pindar, Clerk, Leek-street.

MARCH 16. — **London.** — REDECORATION. — Extension and internal and external redecoration of the Administrative Offices in Bishop's-road, Bethnal Green, E.2, for the Guardians. C. Faulkner Jones, Clerk, Administrative Offices, Bishop's-road, Bethnal Green, E.2. Deposit £2 2s.

MARCH 16.—**London.**—LIGHTING.—Installation of electric lighting in the extension of the administrative offices in Bishop's-road, Bethnal Green, E.2, and for the rewiring of the existing building, for the Bethnal Green B.G. Meakin, Archer & Co., architects, 73–6, King William-street, London, E.C.4. Deposit £2 2s.

MARCH 16.—**Normanton.**—HOUSES.—Thirty-four houses on the Hanson House estate, for the U.D.C. W. F. Copp, architect.

MARCH 16.—**Plymouth.**—REPAIRS.—To certain premises at 45, Ivydale-road, for the C.B. R. J. Fittall, Town Clerk.

MARCH 17.—**Barnet.**—WOODWORK.—Woodwork in connection with the temporary receiving wards at the Wellhouse Hospital, and also for the plumbing work, for the B.G. Clerk of the Guardians, 1, Wellhouse-lane.

MARCH 17.—**Galashiels.**—HOUSES.—Twenty-four houses at Tweed-road, for the T.C. J. & J. Hall, architects.

MARCH 17.—**Liverpool.**—BUILDING.—Doctor's house and porter's lodge and the construction of roads and drains and boundary fences at Highfield Sanatorium, Knotty Ash, for the T.C. Land Steward and Surveyor. Deposit £2 2s.

MARCH 17.—**Manchester.**—REBUILDING.—Police and fire station, Great Jackson-street, Hulme, for the T.C. City Architect. Deposit £1 1s.

MARCH 17.—**Pontardawe.**—HOUSES.—Thirty-two houses at Tygwyn site, Clydach, for the R.D.C. E. D. Jones, A.R.I.B.A., architect. Deposit £2.

MARCH 17.—**Wallingford.** — HOUSES. — Fourteen houses at Cholsey, for the R.D.C. J. G. T. West & Son, architects, The Knowl, Abingdon.

MARCH 17.—**West Riding.**—REPAIRS.—General repairs and painting, &c., to Court Houses, police stations, lock-ups, &c., for the C.C. P. O. Platts, A.R.I.B.A., County Architect, County Hall, Wakefield.

MARCH 18.—**Cardiff.**—PLATFORM.—New covered platform and other works at Cardiff Docks Station, for the G.W.R. Engineer, Paddington Station, W.2. Deposit £2 2s.

MARCH 18.—**Drogheda.**—HOUSES.—Twelve houses at Sandyford Alley, Drogheda, for the Irish Sailors and Soldiers Land Trust. Engineer, 30, Lower Fitzwilliam-street, Dublin. Deposit £2 2s.

MARCH 18.—**Glasgow.**—PAINTING.—Painter work required at (1) Springfield and Kinnear roads; and (2) Garvald-street, in connection with the housing scheme, for the T.C. J. Lindsay, Town Clerk.

MARCH 18.—**Hull.**—C. AMBER.—Small switch chamber in Stoneferry-road, for the T.C. F. W. Bricknell, City Engineer.

MARCH 18.—**Kingston-upon-Hull.**—BUILDING.—Construction of ferro-concrete and brick sumps and shafts, for the T.C. H. Bell, City Electrical Engineer and Manager. Deposit 10s.

MARCH 18.—**Londn.**—PAINTING.—Cleaning and repainting station buildings, &c., at (1) Kingham, Fladbury, &c.; (2) Stourbridge Junction, Lye, &c.; (3) Old Hill, Rowley Regis, &c.; (4) Wolverhampton (Low Level) and Wolverhampton (Herbert-street) Goods Depot; (5) Birmingham (Snow Hill); (6) Liverpool and Birkenhead, for the G.W.R. F. R. E. Davis, Secretary, Paddington Station, London, W.2.

MARCH 18.—**Manchester.**—SHELTER.—Bowl-house and shelter at the Chorlton-cum-Hardy recreation ground, for the T.C. City Architect. Deposit £1 1s.

MARCH 18.—**Manchester.**—OFFICES.—General offices, mess room, &c., on the site of the new gasworks at Partington, for the T.C. Wm. Newbigging, consulting engineer, 5, Norfolk-street. Deposit £2 2s.

MARCH 18.—**Wantage.** — HOUSES. — Twenty-two houses in the parishes of Brightwalton, Blewbury, Compton, Hampstead Norris and Sparsholt, for the R.D.C. J. W. Harris, engineer and surveyor.

MARCH 19.—**Altrincham.**—HOUSES.—Twenty type "B" houses in St. Mark's-avenue, on the estate at Oldfield Brow, for the U.D.C. H. E. Brown, surveyor, Deposit £2 2s.

MARCH 19.—**Belper.**—EXTENSION.—Extension of the sewage disposal works at Holbrook, for the R.D.C. Elliott & Brown, chartered civil engineers, Burton Buildings, Parliament-street, Nottingham. Deposit £1 1s.

MARCH 19.—**Cardiff.**—HOUSES.—Six houses at Eastbrook, Dinas Powis, for the R.D.C. M. Warren, Clerk to the Council, Park House, 20, Park-place. Deposit £2.

MARCH 19.—**Edinburgh.**—PAINTING.—Painter and electric works at Balfour-place School addition, for the E.C. J. Stewart, Executive Officer.

MARCH 19.—**Stapleford.**—HOUSES.—Ten pairs of non-parlour houses on the Attenborough-lane site, for the R.D.C. G. C. Hardy, architect, 11, Church-street. Deposit £2 2s.

MARCH 20.—**Biggleswade.**—HOUSE.—New court house in Saffron-road, for the Bedfordshire C.C. F. W. Smart, County Surveyor, Shire Hall, Bedford. Deposit £1 1s.

MARCH 20. — **Eastry.** — REBUILDING. — Rebuilding chimneys at the Poor Law Institution, for the B.G. Clerk, Salisbury House, Sandwich.

MARCH 20.—**Essex.**—SECONDARY SCHOOL.—Erection of at Ilford, for 456 pupils, for the Education Committee of the Essex County Council. The County Architect, Springfield Old Court, Chelmsford. Deposit £2 2s., to F. H. Owers, F.S.A.A., County Accountant, Duke-street, Chelmsford.

MARCH 20.—**Gorwydd (near Llangammarch).**—REPAIRS.—Internal dismantling, reconstructing and renovating of the Gosen C.M. Chapel, for the Authorities J. Owen Parry, architect, Ammanford. Deposit £3 3s.

✱ MARCH 20. — **Leyton.** — INSTALLATION OF ELECTRIC LIGHT AND CENTRAL HEATING SYSTEM.—At the Sybourn-street new school for infants, for the U.D.C. John H. Jacques, L.R.I.B.A., 61, West Hamlane, Stratford, E. 15. Deposit £1 each (either wiring or heating).

MARCH 20.—**Torquay.** — ALTERATION. — Alteration and remodelling of St. Marychurch Church of England school, for the Managers. B. Widdows, architect, St. James' Chambers, Derby. Deposit £1 1s.

MARCH 22.—**Abertillery.**—REINSTATEMENT.—After fire of 19, Richmond-road, Six Bells, Abertillery, for adaptation as a steward's house for the Six Bells Club and Institute, Ltd. Hy. Waters, M.S.A., architect, Beaufort.

MARCH 22.—**Chelmsford.**—BUILDING.—Shelter and conveniences near the junction of Baddow-road and Moulsham-street, for the T.C. E. J. Miles, Borough Engineer. Deposit £2 2s.

MARCH 22.—**Chelmsford.** — DEMOLITION. — Of the existing buildings at Sandford Mill, Springfield, together with various other smaller buildings and general clearing of the site, for the T.C. E. J. Miles, Borough Engineer. Deposit £1 1s.

MARCH 22.—**Chelmsford.**—HOUSES.—For (1) four houses at Galleywood; (2) two at Great Leighs; (3) two at Little Leighs; (4) two at Little Waltham, for the R.D.C. J. Dewhirst, engineer and surveyor, Council Offices, Waterloo-lane.

MARCH 22.—**Durham.**—EXTENSIONS.—For (*a*) High Spen boys' Council school—alterations and additions, and (*b*) Highfield Council school—extensions, for the C.C. F. Willey, F.R.I.B.A., 34, Old Elvet, Durham.

MARCH 22.—**Liverpool.**—BUILDINGS.—New Athenæum building, Church-alley and School-lane, for the T.C. Willink & Dod, architects. Deposit £5 5s.

MARCH 22.—**Lowestoft.**—SCHOOL.—Practical Instruction rooms at the Central School, for the E.C. S. W. Mobbs, A.R.I.B.A., Borough Surveyor. Deposit £3 3s.

MARCH 22.—**Lytham St. Annes.**—RECONSTRUCTION OF BATHS.—At Lytham. Contract No. 1: Demolition and removal from site of the existing baths section, including plant. Contract No. 2: Rebuilding of the baths section, alterations to halls, and reconstruction of front entrance block, for the B.C. Borough Engineer and Surveyor, Town Hall, St. Annes. Deposit £1 1s (cheque only).

MARCH 22.—**Newton Abbot.**—CONVENIENCE.—Public convenience at Bovey Tracey, for the R.D.C. Surveyor, 12, Summerland-street.

MARCH 22.—**South Stoneham.**—HOUSES.—Thirty-four non-parlour type houses, at Wimpson, Millbrook, Southampton, for the R.D.C. W. R. Cowell, Building Surveyor, The Workhouse, West End. Deposit £2 2s.

MARCH 22.—**Tredegar.**—BUILDING.—Construction of new premises in Lower Coronation-street, for the County Club and Institute, Ltd. W. Edgar Jones, architect.

MARCH 23.—**Belfast.**—BUILDINGS.—Construction of buildings, &c., at the Street Cleansing Depot, between Boundary-street and Dover-street, for the C.B. City Surveyor.

MARCH 23.—**Berks.**—SEWAGE OUTFALL WORKS.—Construction of, at Broadmoor Asylum, for the Commissioners of His Majesty's Office of Works Contracts Branch, King Charles-street, London, S.W.1. Deposit £1 1s. (cheques payable to the Commissioners).

MARCH 23.—**Colchester.**—TELEPHONE EXCHANGE.—Erection of, at Colchester, for the Commissioners of H.M.O.W. Contracts Branch. King Charles-street, London, S.W.1. Deposit £1 1s. (Cheques payable to the Commissioners.)

MARCH 23.—**East Dereham.**—CONVENIENCE.—Public convenience, for the U.D.C. Surveyor, Theatre-street.

MARCH 23.—**Glasgow.**—EXCHANGE.—Telephone Exchange at Maryhill, for H.M.O.W. Architect, H.M. Office of Works, 122, George-street, Edinburgh. Deposit £1 1s.

MARCH 23.—**Henley.**—COTTAGES.—Cottages and bungalows at Sonning Common—10 cottages and 5 bungalows, for the R.D.C. E. V. Ive, architect.

MARCH 23.—**Leeds.**—HOUSES.—Seventy-two houses, 18 on each of the following housing estates:—Wyther House, Middleton, Meanwood, Hawksworth Wood, for the T.C. W. T. Lancashire, City Engineer.

✱ MARCH 23.—**Lincolnshire.**—CONVALESCENT HOME.—Erection of, to accommodate 150 patients, for the Derbyshire District Miners' Welfare Committee. Percy B. Houfton, F.R.I.B.A., Furnival-chambers, Chesterfield. Deposit £2 2s.

MARCH 23.—**Ludlow.**—HOUSES.—Thirty-one houses at Henley-road, for the T.C. W. G. Lane, Borough Surveyor. Deposit £2 2s.

MARCH 23.—**Mallaranny.**—REPAIRS.—Repairs to the hotel at Mallaranny, for the Great Southern Railway. C. E. Riley, Secretary, Kingsbridge Station, Dublin.

MARCH 23.—**Mattingley.**—RESTORATION.—Restoration to be carried out at the Church, for the Committee. B. D. Cancellor, F.R.I.B.A., Queen Anne Chambers, Winchester.

MARCH 24.—**Ashwell.**—COTTAGES.—For (*a*) 10 cottages, Ashwell, No. 1 site; (*b*) 16 cottages, Ashwell, No. 2 site; (*c*) 6 cottages, Hinxworth; (*d*) 4 cottages, Barley, for the R.D.C. J. C. Tickle, architect, 139, Lytton-avenue, Letchworth, Herts. Deposit 10s. 6d. each.

MARCH 24.—**Dartford.**—REPAIRS.—Building brickwork settings for steam boilers and economiser, at the Southern (Upper) Hospital, for M.A.B. T. Cooper, Engineer-in-Chief, Office of the Board, Victoria Embankment, E.C.4. Deposit £3 3s.

MARCH 24.—**Elland.**—HOUSES.—Three blocks of four houses each of non-parlour type, on the Jepson-lane site, for the U.D.C. T. E. Fisher, L.R.I.B.A., architect. Deposit £1 1s.

MARCH 24. — **Hertfordshire.**—SCHOOL.—Erection and completion of a new County Council school to accommodate 200 scholars at Borrington, for the County Council. Lieut.-Col. A. E. Prescott, County Surveyor and Architect, County Surveyor's Office, Hatfield, Herts.

✱MARCH 24.—**Kent.**—NEW BOILER HOUSE.—At the Southern Hospital, Dartford, Kent, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C.4. Deposit £1.

MARCH 24.—**North Aldershot.**—REPAIRS AND MATERIALS.—War Dept. contract from April 6, 1926, at Blackdown and Deepcut (including Woking and Pirbright). Commanding Royal Engineer, Marlborough Lines, North Aldershot. Schedule of prices, 12s. 6d. per copy, plus postage 1s.

✱MARCH 24.—**Various Places.**—ALTERATIONS.—(1) Alterations and additions at St. Luke's Hospital, Lowestoft; (2) alterations at Downs Hospital for Children, Sutton, Surrey; (3) alterations to entrance South Eastern Ambulance Station, New Cross-road, S.E.14, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C.4. Deposit £1 in respect of each work.

✱MARCH 24.—**Various Places.**—CLEANING, PAINTING AND REPAIR WORKS.—(1) North Western Hospital, Lawn-road, Hampstead, N.W.3; (2) Northern Hospital, Winchmore Hill, N.21; (3) Western Ambulance Station, Seagrave-road, Fulham, S.W.6; (4) South Western Ambulance Station, Landor-road, Stockwell, S.W.9., for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C.4. Deposit £1 in respect of each work.

MARCH 24.—**Wakefield.**—TELEPHONE EXCHANGE.—Erection of, at Sandal, for the Commissioners of His Majesty's Office of Works, Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (Cheques payable to the Commissioners.)

MARCH 25.—**Clitheroe.**—POST OFFICE.—Erection of a new Post Office at Clitheroe, for the Commissioners of His Majesty's Office of Works. Contracts Branch, King Charles-street, London, S.W.1. Deposit £1 1s. (cheques payable to the Commissioners).

MARCH 25.—**Cushinstown.**—SCHOOL.—New National school at Cushinstown, Co. Wexford. P. Parker, P.P., Cushinstown, Ballinaboola, Wexford.

✱MARCH 26.—**Leicester.**—SCHOOL BUILDINGS.—Erection of proposed elementary school, Marriott-road, Saffron-lane, Leicester, for the City Education Committee. F. P. Armitage, Director of Education, Town Hall, Leicester. Deposit £1 1s.

MARCH 26.—**Manchester.**—EXCHANGE.—Telephone exchange at Ardwick, for H.M.O.W. Contracts Branch, H.M. Office of Works, King Charles-street, S.W.1. Deposit £1 1s.

MARCH 26.—**Southampton.**—SCHOOL.—Erection of two classrooms and domestic subjects room to Stockbridge Council School, for the Hants C.C. A. L. Roberts, County Architect, The Castle, Winchester. Deposit £1 1s., payable to the Hants County Council, and crossed "Lloyds Bank, Ltd., Capital and Counties Branch, Winchester."

MARCH 26.—**Stirling.**—HOUSES.—Thirty-eight houses at Drip-road site, for the T.C. A. H. Goudie, Burgh Surveyor. Deposit £1.

✱MARCH 27.—**Bedford.**—HOUSES.—Erection and completion of 20 in Dents-road, off London-road, for the B.C. Borough Engineer and Surveyor, Borough Surveyor's Office, Newnham House, Horne-lane, Bedford. Deposit £2 2s.

MARCH 27.—**Par.**—ALTERATIONS.—Renovation and alteration of the Wesleyan Church, Par, Cornwall. F. C. Jury, architect, Penarwyn, Gorran.

✱MARCH 27.—**Reigate.**—HUT.—Supply of a second-hand hut (Army or otherwise) for use as a special subjects centre for the Reigate Education Committee. Edmund H. Bourne, Secretary, Municipal Buildings, Reigate, Surrey.

MARCH 29.—**Salford.**—ALTERATIONS.—At the Union Infirmary, Stott-lane, Pendleton, for the B.G. W. T. Gunson & Son, architects, 10, Marsden-street, Manchester. Deposit £2 2s.

✱MARCH 29.—**Wigan.**—HOUSES.—Erection of 98 in brickwork on the Bottling Wood site, in lots of 20, 28, 20, 16, and 14 on Plots A, B, C, D, and E, respectively, for the Corporation. R. B. Donald, M.Inst.C.E., Borough Engineer, Municipal Buildings, Library-street, Wigan. Deposit £3 3s. (by cheque, made payable to the Wigan Corporation).

✱MARCH 30.—**Great Yarmouth.**—EMPLOYMENT EXCHANGE.—Erection of, at Great Yarmouth, for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (Cheques payable to the Commissioners.)

MARCH 30.—**Cockermouth.**—HOUSES.—Twenty-four houses of parlour and non-parlour type on Fitz-road, Cockermouth, together with drainage and fencing works, and roads and sewers, for the U.D.C. Hy. Graham, engineer and surveyor. Deposit £2 2s.

MARCH 30.—**Leyton.**—HOUSES.—Seventy-five houses on the Nursery Park estate, Lea Bridge-road, Leyton, E.10, for the U.D.C. J. H. Jacques, L.R.I.B.A., 61, West Ham-lane, Stratford. Deposit £2.

MARCH 30.—**Wharfedale.**—ELECTRICITY.—Installation of electricity at the Isolation Hospital, Menston, for the Hospital Committee. P. S. Wade, Clerk, Union Offices, Otley.

MARCH 31.—**Gloucestershire.**—POLICE STATION.—Erection of a Police Station at Pucklechurch, near Bristol, for the Standing Joint Committee of the Gloucestershire County Council. E. S. Sinnott, County Surveyor, Shire Hall, Gloucester. Deposit £2 2s.

APRIL 1.—**Southampton.**—SCHOOL.—Erection of three new classrooms, cloakrooms and offices, &c., to Crondall Council school, for the Hants C.C. A. L. Roberts, County Architect, The Castle, Winchester. Deposit £1 1s., payable to the Hants County Council, and crossed "Lloyds Bank, Ltd., Capital and Counties Branch, Winchester."

✱APRIL 3.—**Oldham.**—FOUNDATION WORKS, CONTRACT No. 3.—Construction, completion, maintenance, &c., of the piling and ferro-concrete foundation work, in connection with the erection of a new generating station at Slack's Valley, Chadderton, for the Oldham Corporation. F. L. Ogden, Borough Electrical Engineer, Greenhill Electricity Offices, Oldham. Deposit £1 1s. for each specification.

APRIL 6.—**Featherstone (Yorkshire).**—HOUSES.—Tenders for all trades in connection with the proposed erection of the second section of 50 houses on the Streethouse housing site, for the U.D.C. Samuel Chesney, A.R.I.B.A., Architect to the Council, Council Offices, Featherstone. Deposit 2 guineas.

✱APRIL 6.—**Oxted.**—HOUSES.—Erection of twenty-two (16 class "A" and 6 class "B"), at Maple-road site, Whyteleafe, and erection of 12 houses (class "A"), at Westmore Green site, Tatsfield, for the Godstone R.D.C. Sydney F. Evershed, L.R.I.B.A., Lloyds' Bank-chambers, Oxted. Deposit 3 guineas.

✱APRIL 7.—**Letchworth.**—HOUSES.—Construction of 63 at Hillbrow, for the U.D.C., in various groups. The Clerk, Council Offices, Broadway Chambers, Letchworth. Deposit £2 2s.

✱APRIL 7.—**Surrey.**—COTTAGES.—Erection of four, in Dudley-road, Richmond, for the T.C. Borough Engineer and Surveyor, Town Hall, Richmond. Deposit £1 1s.

✱APRIL 27.—**Durham.**—SCHOOL.—Erection of the Eppleton Colliery new Council school for the Durham C.C. Mr. F. Willey, F.R.I.B.A., 34, Old Elvet, Durham.

NO DATE.—**Andover.**—THEATRE.—Cinematograph theatre and shops. F. Henshaw, L.R.I.B.A., Chartered Architect, Lloyds Bank Chambers.

NO DATE.—**Cwmgorse.**—PREMISES.—New premises and alterations to the existing premises, for the Industrial Co-operative Society, Ltd. D. Morgan, architect, Brynheulog, Gwauncaegurwen. Deposit £3 3s.

NO DATE.—**Darfield.**—HOUSES.—Eighty-six houses on land situate in Barnsley-road, and for the necessary roads and sewers, for the U.D.C. Dyson, Cawthorne & Coles, architects, 10, Regent-street, Barnsley.

NO DATE.—**Inverkeithing.**—HOUSES.—Ten houses at Spencer Field site, for the T.C. P. Reid, L.R.I.B.A., architect, Park House. Deposit £1 1s.

NO DATE.—**Morley.**—REINSTATEMENT.—After fire of the Victoria-road elementary school, for the T.C. F. Turner, B.Sc., Borough Engineer and Surveyor. Deposit £2 2s.

NO DATE.—**Rhyl.**—REPAIRS.—Repairs to the water tower, for the U.D.C. L. G. Hall, Water Engineer, Paradise-street.

MATERIALS, etc.

MARCH 15.—**Belfast.**—MATERIALS.—Plumbing fittings, timber, cement, &c., for the Mental Hospital Committee. James Harper, Secretary.

MARCH 15.—**Chailey.**—MATERIALS.—Broken granite, &c., screenings, tarred macadam, hardcore, flints, gravel, sand, and refined tar, for the R.D.C. R. P. Cheale, District Surveyor, Surveyor's Office, Union Buildings, West-street, Lewes.

MARCH 15.—**Coventry.**—MATERIALS.—Bricks, cement, lime, &c., road materials, stoneware pipes, &c., iron castings, for the T.C. E. H. Ford, City Engineer and Surveyor,

MARCH 15.—**Croft.**—MATERIALS.—Whinstone, slag and tarred slag, for the R.D.C. J. Hodgson, surveyor, North Cowton.

MARCH 15.—**Hanwell.**—TAR.—Distilled tar, for the U.D.C. P. Scott, Clerk.

MARCH 15.—**Ilkeston.**—MATERIALS.—300 tons broken granite (various sizes), 600 tons furnace slag (various sizes), 1,000 tons tarred macadam (various sizes), 500 yds. kerbs, 200 yds. super. concrete slabs, for the T.C. Borough Surveyor.

MARCH 15.—**Kidderminster.**—MATERIALS.—Broken granite, cold blast slag, slag macadam, granite kerbstones and setts, granite concrete paving slabs, concrete kerbs and channels, Portland cement, and bricks, for the T.C. J. Hawcroft, Borough Surveyor.

MARCH 15.—**Knaresborough.**—MATERIALS.—Tarred limestone, refined tar for spraying, tar for grouting, for the R.D.C. J. G. Husband, Highways Surveyor, 14, Bower-road, Harrogate.

MARCH 15.—**Normanton.**—MATERIALS.—Stone and concrete, flags, kerbs, channels, setts, granite, limestone, slag, and tarmacadam, for the U.D.C. Surveyor.

MARCH 15.—**Northamptonshire.**—MATERIALS.—Tarred macadam, broken granite, tar, surface dressing of various main roads in the county, for the C.C. E. A. Black, County Surveyor, County Hall, Northampton.

MARCH 15.—**Reigate.**—MATERIALS.—Granite macadam, granite kerb, concrete beach, gravel, Portland cement, tarpaving, for the T.C. F. T. Clayton, Borough Surveyor.

MARCH 15.—**Sevenoaks.**—MATERIALS.—Glazed stoneware pipes, bends, junctions, &c., cement, slag, tarmacadam, slag dust, granite chippings, for the U.D.C. Engineer and Surveyor.

MARCH 15.—**West Ashford.**—MATERIALS.—Kentish ragstone, flints, tarring gravel and binding material, for the R.D.C. T. W. Dickinson, Highway Surveyor, Tufton Hall Ashford, Kent.

MARCH 16.—**Belfast.**—MATERIALS.—Various building and other materials, for the B.G. Clerk.

MARCH 16.—**Chelmsford.**—MATERIALS.—Broken Guernsey granite (200 tons 1½ in., 500 tons ¾ in. or ¼ in., free from dust), granite kerb, Scotch, Norwegian, or equal (4,000 ft. 5 in. by 10 in. dressed edge kerb; 2,500 ft. 6 in. by 12 in. dressed edge kerb, in lengths of not less than 2 ft.; 100 ft. 5 in. by 10 in. circular kerb, 4 ft. radius; 100 ft. 5 in. by 10 in. circular kerb, 6 ft. radius; 200 ft. 6 in. by 12 in. circular kerb, 6 ft. radius), for the T.C. E. J. Miles, Borough Engineer and Surveyor.

MARCH 16.—**Darlington.**—FENCING.—650 lin. yds. of wrought iron fencing, together with entrance gates, at The Park, for the C.B. Borough Surveyor.

MARCH 16.—**Enfield.**—MATERIALS.—Granite, tarred slag macadam, shingle, hoggin, tar, surface tarring of roads, for the U.D.C. Engineer and surveyor.

MARCH 16.—**Faversham.**—MATERIALS.—Pit flints (broken), shingle and fine gravel, for the R.D.C. J. G. Chittenden, District Surveyor, Ashford-road.

MARCH 16.—**Hunslet.**—MATERIALS.—Highway materials, for the R.D.C. W. B. Pindar, Clerk.

MARCH 16.—**Leatherhead.**—TAR.—400 barrels of refined tar for road tarspraying, for the U.D.C. S. R. Drake, Town Surveyor.

MARCH 17.—**Bridge.**—MATERIALS.—Surface-picked and other hard flints and gravel, for the R.D.C. S. Sladden, Highway Surveyor, Littlebourne, Canterbury.

MARCH 17.—**Chorley.**—MATERIALS.—Paving setts and kerbs, flags for street and other purposes, broken granite and chippings for roads, limestone chippings, glazed earthenware pipes for sewers and drains, for the T.C. Borough Surveyor.

MARCH 17.—**Down.**—MATERIALS.—Timber, lime, cement, paints, steam and lead pipes, for the District Asylum. Resident Medical Superintendent.

MARCH 17.—**Easingwold.**—MATERIALS.—Whinstone, slag, tarred slag, and tarred compounds, for the R.D.C. J. R. Tweddle, clerk.

MARCH 17.—**Hull.**—MATERIALS.—Stone for macadamising, cement, lime, Trinidad epure, residual bitumen, graded sand for asphalting, paints, oils, and varnish, pipes and gullies, iron castings, iron and steel, for the T.C. F. W. Bricknell, City Engineer.

MARCH 17.—**Kettering.**—MATERIALS.—Granite slag, and tarred macadam, &c., for the repair of the highways, for the R.D.C. F. W. Stowe, Clerk.

MARCH 17.—**Merthyr Tydfil.**—MATERIALS.—Timber, cement, lime, slates, bricks, sewer pipes, limestone, and tarred macdam, paving stone, for the C.B. Borough Engineer.

MARCH 17.—**Radcliffe.**—MATERIALS.—Portland cement, pure lime and limestone chippings, curbs, edging and flags, granite setts, and tarmacadam, for the U.D.C. G. E. Wrigley, engineer and surveyor.

MARCH 17.—**Stevenage.**—MATERIALS.—600 tons broken granite, 1¼ in. to 2 in., 50 tons broken granite, 1 in., 25 tons granite chippings, ¾ in., 50 tons granite dust, 300 tons tarmacadam, ¾ in., 250 tons tarmacadam, ¼ in., for the U.D.C. R. A. Gandy, engineer and surveyor.

MARCH 17.—**Wembley.**—MATERIALS.—Tarred slag, broken granite, gravel, hoggin, sand, &c., for the U.D.C. C. R. W. Chapman, engineer and surveyor.

MARCH 18.—**Farnham.**—MATERIALS.—Selected cold blast dry slag, cement, Hungry Hill flints, for the U.D.C. L. H. Starling, surveyor.

MARCH 18.—**Nelson.**—LIME.—Lime, for the T.C. W. Shackleton, Borough Engineer and Surveyor.

MARCH 18.—**Nelson.**—MATERIALS.—Broken granite and limestone, flags, setts, kerbs, tarred and dried slag, cement, pitch, tar, creosote oil, &c., for the T.C. W. Shackleton, Borough Engineer and Surveyor.

MARCH 19.—**Exeter.**—MATERIALS.—Bricks, Portland cement, building lime and slates, cast iron pipes, granite channelling, kerb, and setts, Yorkstone flags, concrete flags, painting and paperhangers' work, stoneware pipes, miscellaneous iron castings, stone and sand, timber, for the T.C. T. Moulding, City Engineer and Surveyor.

MARCH 19.—**Great Yarmouth.**—MATERIALS.—Painters' and plumbers' materials, timber, English timber, gully grates, manhole covers, and general castings, wrought iron, steel, &c., for the C.B. S. P. Thompson, Borough Engineer.

MARCH 19.—**Woking.**—TAR.—50,000 gallons of dehydrated tar, for the U.D.C. G. J. Wooldridge, surveyor.

MARCH 20.—**Batley.**—MATERIALS.—Road materials, sanitary goods, &c., for the T.C. Borough Engineer, Brunswick-street.

MARCH 20.—**Burnley.**—MATERIALS.—Setts, flags (natural stone), flags (concrete), kerbs, channel, bricks (red), gravel, granite macadam, cement, pitch, creosote, earthenware pipes, ironwork (street grates, &c)., lime, limestone, &c., &c., for the C.B. A. Race, Borough Engineer and Surveyor.

MARCH 22.—**Rathmines and Rathgar.**—MATERIALS.—Iron castings, paints and oils, plumbing work, Portland cement, road materials, stoneware and fire clay goods, timber, for the U.D.C. S. Mason, clerk, Town Hall, Rathmines.

MARCH 22.—**Romney Marsh.**—MATERIALS.—Tar and tar substitute, rock, granite, granite chippings, beach, and grit, for the R.D.C. H. J. Smith, District Surveyor.

MARCH 22.—**Sculcoates.**—MATERIALS.—Stone, Hornsea gravel, land gravel, tarred slag, and chippings, for the R.D.C. B. Hinchliffe, surveyor, 4, Parliament-street, Hull.

MARCH 22.—**Staines.**—MATERIALS.—Road materials, including tarmacadam, slag, macadam, limestone, chippings, &c., gravel, washed shingle, sand and hardcore, tar and tar compounds, for the R.D.C. A. Langston Yockney, acting engineer and surveyor, Surveyor's Offices, London-road, Ashford, Middlesex.

MARCH 23.—**Great Crosby.**—MATERIALS.—Granite macadam and chippings, limestone macadam and chippings, tarred macadam, tar, Portland cement, stoneware pipes, &c., for the U.D.C. J. A. Wright, surveyor.

MARCH 24.—**East Grinstead.**—MATERIALS.—Tarmacadam, broken granite and chippings, broken limestone and chippings, broken Sevenoaks stone, kerbing, sand, tar, flint screenings, and stoneware pipes, for the R.D.C. Surveyor, 36, High-street.

MARCH 24.—**Eltham.**—MATERIALS.—Flints, sand, beach or rock chippings, for the R.D.C. A. E. Price, surveyor. Lyminge, Kent.

MARCH 24.—**Isle of Thanet.**—MATERIALS.—2,000 tons granite, 1,750 tons tarmacadam, 500 yds. broken flints, 750 yds. crushed pebble or chips, for the R.D.C. G. L. Butterworth, surveyor, Station-road, Birchington.

MARCH 24.—**Malling.**—MATERIALS.—Broken Kentish ragstone, broken granite, tarred macadam, footpath gravel, tar, and tar compounds, pea gravel or sand, for the R.D.C. H. Vickery, Highway Surveyor, West Malling.

MARCH 24.—**Wortley.**—MATERIALS.—Macadam, tar and pitch, kerbs, iron castings, sanitary pipes, for the R.D.C. F. Thurlby, engineer and surveyor, Grenoside, near Sheffield.

MARCH 25.—**Waterloo-with-Seaforth.**—MATERIALS.—Granite, macadam, chippings, &c., limestone chippings, refined tar, for the U.D.C. J. R. Fothergill, engineer and surveyor.

MARCH 27.—**Altrincham.**—MATERIALS.—Welsh granite macadam and chippings, flags, setts, edgings and kerbs, sanitary pipes, cement, limestone chippings, for the U.D.C. Surveyor.

MARCH 27.—**Dewsbury.**—MATERIALS.—Granite setts, York setts, kerbs, flags, broken stone, broken granite, concrete flags, Portland cement, earthenware and stoneware pipes, gullies, iron castings, limestone and granite chippings, tarred granite and tarred slag, clean gravel and sand, for the C.B. H. Dearden, Borough Engineer.

APRIL 6.—**Argentina.**—MATERIALS.—Sanitary ware for military barracks and hospitals, for the Commercial Secretary of the Ministry of War. Department of Overseas Trade, 35, Old Queen-street, London, S.W. 1.

ENGINEERING, IRON AND STEEL.

MARCH 15.—**Grimsby.**—BRIDGE.—Lifting bridge over the Alexandra Dock at Grimsby, about 45 ft. span and 50 ft. in width, together with 240 lineal feet of viaduct 50 ft. in width, for the C.B. H. Gilbert Whyatt, Borough Engineer. Deposit £10 10s.

MARCH 15.—**Stockport.**—EXTENSIONS.—Construction of screening chambers, pump-house, detritus tanks, and other appurtenant works, including mechanical equipment, at the Stockport Sewage Works, Cheadle Heath, for the C.B. H. Hamer, Borough Surveyor. Deposit £5 5s.

MARCH 17.—**Blything.**—MAIN.—Supplying and laying a 6 in. steel main across the tidal river Blyth, at Southwold Harbour, and for supplying, laying and fixing 4 in., 3 in. and 2 in. cast-iron water mains, valves and hydrants for the works of water supply in the parish of Walberswick, for the R.D.C. J. Mackworth Wood, consulting engineer. Deposit £5 5s.

MARCH 18.—**Dublin.**—TANK.—For (1) the supply of cast-iron pipes; (2) the supply and erection of a cast-iron or ferro-concrete water tank in connection with the improvement of the water supply in the Phœnix Park, for the Commissioners of Public Works. J. J. Healy, Secretary, Oifig Oibreach Puibli (Office of Public Works), Baile Atha Cliath.

MARCH 22.—**Denby and Cumberworth.**—RESERVOIR.—Construction of a brick-lined concrete reservoir in Rusby Plantation, at Birds Edge, Denby, together with connections to the supply and draw-off mains of the existing reservoir adjoining, for the U.D.C. C. H. Marriott, Son & Shaw, engineers, Church-street Chambers, Dewsbury. Deposit £2 2s.

MARCH 23.—**Rochdale.**—REPAIRS.—To reservoir, situate on the Institution estate at Birch Hill, Dearnley, near Rochdale, for the B.G. F. H. Brunt, 17, Victoria-street, Westminster, London, S.W.1. Deposit £3 3s.

ROAD, SEWERAGE, AND WATER WORKS.

MARCH 15.—**Chiswick.**—MAKING-UP.—Of a portion of Prebend-gardens, for the U.D.C. E. Willis, surveyor.

MARCH 15.—**Chiswick.**—SEWERS.—Construction of soil and surface water sewers in a portion of Lawford-road, for the U.D.C. E. Willis, Surveyor.

MARCH 15.—**Frinton-on-Sea.**—IMPROVEMENTS.—Reconstruction of (1) Upper Fourth-avenue, (2) Old-way, (3) Old Kirby-road, for the U.D.C. Surveyor.

MARCH 15.—**Kirkcaldy.**—SEWERAGE.—Street and sewerage works, to be executed at housing site at Glencraig, Lochore, for the D.C. W. Williamson, F.R.I.B.A., architect, 220, High-street, Kirkcaldy. Deposit £1 1s.

MARCH 15.—**Lydney.**—MAIN.—Duplication of the 5 in. cast-iron rising main from the pumping station in Ferneyley Wood to the service reservoir, including the installation of water level indicator apparatus, for the R.D.C. A. P. I. Cotterell & Son, chartered civil engineers, 17, Old Queen-street, Westminster. Deposit £3 3s.

MARCH 15.—**Prestwick.**—RECONSTRUCTION.—Reconstruction of Main-street and Ayr-road from Ladykirk-road to Prestwick Toll, for the T.C. Burgh Surveyor.

MARCH 15.—**Steyning.**—ROADS.—Re-making roads and paths at the Children's Homes, Shoreham-by-Sea, for the B.G. T. A. Brooks, surveyor.

MARCH 15.—**Wakefield.**—PIPES.—725 ft. of 22 in. internal diameter and 11,001 ft. of 20 in. internal diameter steel pipes, lined with bitumen ¼ in. thick, centrifugally applied, including special pipes for river, railway, and other crossings, for the T.C. C. Clemesha Smith, Waterworks Engineer. Deposit £2 2s.

MARCH 15.—**Whitstable.**—MAINS.—Excavating trenches, &c., and supplying and laying about 9 miles of iron water mains, from 3 in. to 9 in. diameter, with all necessary fittings, for the U.D.C. J. Dunn, surveyor and water engineer. Deposit £2 2s.

MARCH 16.—**Dartford.**—ROAD.—Construction of a new road from High-street to Lowfield-street, for the U.D.C. Surveyor.

MARCH 16.—**Epsom.**—MAKING-UP.—Of Upper Court-road, for the U.D.C. E. R. Capon, engineer and surveyor.

MARCH 16.—**Kirkcaldy.**—STREET.—Street and sewerage work at Windygates, for the D.C. G. B. Deas, architect, Central Chambers, Kirkcaldy.

MARCH 16.—**Manchester.**—PAVING.—Paving, &c., at the City Abattoirs, Water-street, for the T.C. General Superintendent, Markets Office.

MARCH 16.—**Tottenham.**—MAKING-UP.—Of (*a*) Crown-road, (*b*) Commonwealth-road, (*c*) Trulock-road, for the U.D.C. Engineer.

MARCH 17.—**Chelmsford.**—PATHS.—Widening, sewering, formation of new paths and carriageways in Lady-lane and Van Diemans-road, for the T.C. E. J. Miles, Borough Engineer. Deposit £2 2s.

MARCH 17.—**Claeton.**—MAKING-UP.—Of a portion of Wash-lane, for the U.D.C. Surveyor.

MARCH 17.—**Friern Barnet.**—REPAIRS.—Reconstruction works to carriageways of Hampden-road and Sydney-road; surfacing of carriageways to Hampden-road and Sydney-road, for the U.D.C. F. P. Kindell, engineer and surveyor.

MARCH 18.—**Liverpool.**—FENCE.—New boundary fence on the north side of Highfield Sanatorium, Knotty Ash, for the T.C. W. Moon, Town Clerk.

MARCH 18.—**Tadcaster.**—FOOTPATHS.—Construction of new roadways, footpaths and soil and surface water sewers on the Swillington housing site, for the R.D.C. J. Taylor, 23, Park-avenue, Swillington, Woodlesford, near Leeds.

MARCH 18.—**Wickham.**—MAKING-UP.—Of Wellington-road from Back Dunston-road West to the Railway arch, Dunston, as follows: (*a*) Forming, kerbing, channelling, concrete foundation and drainage; (*b*) 3,600 yd. super steam-rolled asphalt macadam surfacing, &c., for the U.D.C. Thos. Fenbow, surveyor.

MARCH 19.—**Fife.**—WIDENING.—Widening of Dunfermline to Crossgates-road, for the Dunfermline D.C. of the C.C. H. MacDiarmid, engineer, Queen Anne-street, Dunfermline. Deposit £3 3s.

MARCH 19.—**Inverness-shire.**—MAIN.—Six-inch water main and other extensive works within the special water supply district. Alex. Cattanach, architect and surveyor, Kingussie, Newtonmore.

MARCH 20.—**Belper.**—PIPES.—2,240 yds. of 3 in. cast-iron pipes as water mains, and appurtenant works, at Mapperley, for the R.D.C. Elliott & Brown, chartered civil engineers, Burton Buildings, Parliament-street, Nottingham. Deposit £1 1s.

MARCH 22.—**Exeter.**—SEWERS.—Construction of roads and sewers in connection with the laying-out of the building site at Buddle-lane, for the T.C. Thos. Moulding, City Engineer and Surveyor. Deposit £1.

✱MARCH 24.—**Berkshire.**—ROAD REPAIRS.—Repairs to roads at Pinewood, Wokingham, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C.4. Deposit £1.

MARCH 24.—**East Linton.**—ROAD.—Construction of a new by-pass of the Great North-road at East Linton, for the East Lothian C.C. P. Clarke, C.E., Dunbar. Deposit £3 3s.

MARCH 29.—**Rochester.**—SEWERS.—For stoneware pipe sewers and other relative works. The works comprise the laying of 392 lin. yds, 6 in. sewers, 7,148 lin. yds. 7 in. sewers, 3,735 lin. yds. 9 in. sewers, 998 lin. yds. 12 in. sewers, 634 lin. yds. 15 in. sewers, 250 lin. yds. 18 in. sewers, for the T.C. W. Law, surveyor and engineer. Deposit £5 5s.

MARCH 29.—**Wood Green.**—IMPROVEMENTS.—To Arcadian-gardens, Sylvan-avenue, Blake-road, and Grosvenor-road, or the U.D.C. C. H. Croxford, engineer and surveyor. Deposit £1 1s.

MARCH 30.—**Cannock.**—SEWER.—Construction of an intercepting sewer, approximately 1½ miles in length, ranging from 36 in. to 12 in. diameter, together with manholes and other contingent works, for the R.D.C. A. H. S. Waters, 63, Temple-row, Birmingham. Deposit £5.

MARCH 31.—**Salcombe.**—MAKING-UP.—Of (1) Herbert-road, (2) Bonaventure-road, and (3) Acland-road, Salcombe, for the U.D.C. J. G. Howard, M.C., Surveyor. Deposit £2 2s.

NO DATE.—**Renfrew (First or Upper District).**—SEWER.—Sewer works at Elderslie housing scheme, for the D.C. J. M. Dow, Housing Architect, County Buildings, Paisley.

Competitions.

(*See Competition News page* 424.)

Auction Sales, Tenders, etc.

MARCH 16.—**New Malden.**—Joseph Hibbard & Sons will sell, without reserve, by order of Mr. George Blay, who has disposed of the freehold upon the premises, "Malden Works," Wellington-crescent, New Malden, large quantities of new plant and stores. Auctioneers, 15, Newington-green, Islington, London, N.16.

✱MARCH 16, 17 & 18.—**Wembley.**—Veryard & Yates will sell, on the premises of Messrs. Wembley Amusements, Ltd., many unique devices, together with machinery and electrical equipment, and various timber buildings and furniture. Auctioneers, 365, Norwood-road, S.E. 27.

✱MARCH 23.—**Finchley.**—Veryard & Yates will sell, at the Market-place, Chapel-street, building materials arising from demolition of the mansion, also two 5-ton waggons. Auctioneers, 365, Norwood-road, S.E. 27.

✱MARCH 23, AND FOLLOWING DAY.—**London, N.W. 10.**—Joseph Hibbard & Sons will sell second portion, without reserve, by order of Messrs. Allnatt, Ltd., at Depot 2,703, Chase Estate, Willesden-lane, Park Royal, N.W. 10, stock of S.H. timber and stores, including Hartley's rolled glass, lead scrap, steam piping, electrical fittings, joinery, &c. Auctioneers, 15, Newington-green, Islington, London, N. 16.

✱MARCH 24.—**Weybridge.**—Veryard & Yates will sell, without reserve, to clear site, "Broadwater House," Oatlands-drive, fittings and fixtures, timber, &c. (arising from demolition of residence). Auctioneers, 365, Norwood-road, S.E. 27.

MARCH 24 & 25.—**Sunbury, Middlesex.**—Nightingale, Page & Bennett will sell, by direction of the Metropolitan Water Board, Sunbury, contractors' plant, machinery, &c. Eagle Chambers, Kingston-on-Thames.

MARCH 25.—**London.**—Fleuret, Adams & Haxell will sell, at the London Auction Mart, 155, Queen Victoria-street, E.C.4, by direction of the Executrix, for sale after a successful occupation of about 18 years, "The White Hart Hotel," Brentwood, Essex, with outbuildings, garden, the whole covering a large area, at the London Auction Mart, 155, Queen Victoria-street, E.C.4. Auctioneers, 22, Bloomsbury-square, London, W.C.

✱APRIL 27.—**Farnborough, Hants.**—Hampton & Sons will sell, at the St. James's Estate Rooms, 20, St. James's-square, S.W.1, freehold building lands, forming part of the Farnborough Hill Estate, Farnborough, Hants, important road frontages, woodlands and pasture lands, superior cottage, in all extending to about 87 acres. Auctioneers, 20, St. James'-square, S.W.1.

Public Appointments.

MARCH 15.—**London.**—Draughtsman.—Temporary appointment under the Roads Department of the Ministry of Transport requiredfor map and plan work in connection with road schemes. Establishment Officer, Ministry of Transport, 6, Whitehall-gardens, S.W.1.

MARCH 18.—**Middlesex.**—(*a*) Building Inspector, (*b*) Assistant Road Foreman required by the Heston and Isleworth Urban District Council. H. J. Baker, Clerk to the Council, Council House, Hounslow, Middlesex, endorsed "Building Inspector" or "Assistant Road Foreman."

✱MARCH 22.—**Norwich.**—Clerk of Works required by the Blofield R.D.C. to undertake the entire supervision of the erection of 96 houses in various parishes. John E. T. Pollard, clerk, 17, Prince of Wales'-road, Norwich.

✱MARCH 25.—**Wigan.**—ARCHITECTURAL ASSISTANT required by the Wigan C.B., in the Borough Engineer's Department. R. B. Donald, M.Inst.C.E., Borough Engineer, Municipal Buildings, Library-street, Wigan.

✱MARCH 31.—**Wakefield.**—Two Temporary Clerks of Works (one for Rotherham and district, and one for Wakefield), required in the County Architect's Department, by the West Riding of Yorkshire C.C. Percy O. Platts, A.R.I.B.A., County Architect, County Hall, Wakefield.

✱NO DATE.—**Sierra Leone.**—Architectural draughtsman required by the Government of Sierra Leone, for the Public Works Department, for a temporary tour of nine months' service. Crown Agents for the Colonies, 4, Millbank, Westminster, S.W.1., quoting M/14355.

FIBROUS PLASTER CEILING SLABS

10,000 SUPL. YARDS IN STOCK *SEVEN SIZES*

SAMUEL WRIGHT & Co. Ltd.

Established over 35 years at

CROWN WORKS, ANDRÉ STREET, HACKNEY, E.8

Telephone: Clissold 412 **Telegrams: "Slatinare, Kinland, London."**

PROPOSED NEW BUILDINGS & OTHER WORKS*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B.E. for Board of Education; M.A.B. for Metropolitan Asylums Board; and M.W.B. for Metropolitan Water Board.

AINTREE.—The British Enka Artificial Silk Co. are to construct a private bridge over the main road to connect the Company's works with the railway siding.

ASHBY-DE-LA-ZOUCH.—The Ashby-de-la-Zouch and District Cottage Hospital trustees are to expend £5,000 on the building of a new wing.

BARNSLEY.—The magistrates have granted a provisional licence for a new hotel at Cundy Cross, near a new housing estate.

BECKENHAM.—A site on the Rectory estate is to be purchased for £6,350 for municipal office accommodation.—New bank premises are to be erected in High-street.

BELFAST.—The Corporation are proposing to erect working-class houses.

BLACKPOOL.—Open-air schemes at Blackpool, costing over a quarter of a million pounds, were explained at the M.H. inquiry. They included a new park development and recreation lands at North Shore of over 96 acres.

BOLTON.—The T.C. passed plans: Leigh Bros., Ltd., 50 houses, Tudor-avenue and off Tudor-avenue; A. Greenhalgh, 10 houses, Melbourne-road; W. Gornall & Sons, Ltd., 105 houses, Crompton Fold estate.

BOURNEMOUTH.—The T.C. has considered the question of additional accommodation at the bowling pavilion in Meyrick Park, and the Borough Engineer is to submit plans for the reconstruction of the pavilion.—The Parks and Pleasure Grounds Committee reported that new workshops and caddy shelter were required at Meyrick Park. The Borough Engineer submitted plan of the proposed new workshops and caddy shelter, the cost of which he estimated at £1,500, and the T.C. approved the plan and tenders are to be invited.—The Borough Engineer submitted a plan showing proposals for terracing the slope on the south side of the cricket pavilion in Meyrick Park at an estimated cost of £1,000, and for the provision of conveniences for both sexes at an estimated cost of £1,800. It was recommended that the proposals be generally approved and the Borough Engineer be instructed to submit detailed drawings for further consideration.—It was also recommended that the Health Committee be asked to take into consideration the question of increasing the accommodation at the existing convenience for women in the main drive and the provision of a men's convenience at the northern end of the park.

BRADFORD.—The Corporation has appointed a special committee to consider a scheme for the provision of a public hall, and the committee are now obtaining information from municipalities who have public halls, whilst the City Architect has been asked to report upon sites suitable for such a hall.—A site at Lesterhills is to be obtained for the erection of a branch library.—A committee are to report as to the best method of extending the nursery school accommodation in the city.—The E.C. has approved plans of the city architect for the erection of a secondary school at Bolling Hall, the cost being estimated at £76,000.—A site off Thornton-road has been acquired for rehousing persons displaced by the White Abbey area improvement.

BRAY.—Plans for a pavilion, which the U.D.C. propose to build on the Esplanade, at a cost of £8,000, and prepared by the Surveyor, have been adopted.

BRIGHTON.—The E.C. recommend the carrying out of big building and alteration schemes during 1927–32.—The Southern Railway Co. propose to reconstruct the stations.

BURGESS HILL.—The M.H. has sanctioned a loan of £3,600 to the U.D.C. in connection with the Council's housing scheme.

BURY.—The Baths Committee approved plans for new baths proposed to be erected on the site of the old Militia Barracks, and instructed the Borough Engineer to prepare plans and obtain tenders for the work.

BUXTON.—The M.H. has sanctioned the borrowing of £10,000 in respect of the subsidies for 100 houses. It was resolved that application be made to the M.H. for sanction to the granting of a subsidy of £100 per house for a further 25 houses.

CHESTERFIELD.—The B.E. has agreed to the proposal of the E.C. to reconstruct the interior of Hipper-street school.—A laundry is to be erected at the maternity home in accordance with revised plans, at a cost of £3,000.

CHIPPENHAM.—A block plan of the erection by Mr. Rodman of 40 houses in Greenway-lane has been approved.

CLITHEROE.—Plans have been approved for the erection of a new fire station in King-lane, adjoining a proposed electrical transformer station.

COLNE.—The T.C. has instructed to proceed with the erection of 60 houses on the Haverholt estate by direct labour.—Plans have been approved for the erection of works in North Valley-road for Fisher, Ridehalgh & Duckett.

DALTON.—A central school is to be erected by the Lancashire E.C. at a cost of £18,000.

DALMUIR.—The Clydebank Corporation are acquiring 56 acres for a housing scheme.

DARLINGTON.—An Italian firm has applied to the Corporation to ascertain whether there is a site available in the borough for the erection of a factory for the manufacture of artificial silk and allied products.

DAYBROOK.—The Home Brewery Co., Ltd., propose to erect a new hotel at Carlton. Mr. J. E. Haslam, architect and surveyor, Worksop.

DERBY.—The Housing Committee of the T.C. propose to purchase nearly 13 acres of land adjoining the mental hospital, for the proposed extensions to the hospital.—At an estimated cost of £260, a urinal is to be erected near the new fish market.—The borough surveyor has also been instructed to submit plans and estimates for underground conveniences in the Market Place.—On the land adjoining the "Seven Stars" public-house a urinal is to be erected at a cost of £130.

DEWSBURY.—Plans have been prepared for the conversion of Highfields House into a home for the blind, at a cost of £11,700.

DONCASTER.—The T.C. has approved a recommendation of the Electricity and Tramways Committee that application be made to the Electricity Commissioners for sanction to borrow the sums of £57,135 and £5,915 for the proposed extension at the electricity generating station.—On the recommendation of the Public Health Committee it was decided to appropriate land to the north-east of Shady Side, Hexthorpe, for the erection of 70 houses required for persons displaced in connection with Church-lane, Portland-place and Rookery Improvement scheme.—Plans are being prepared for new Conservative headquarters, and the purchase of two freehold cottages in Silver-street is now complete. Messrs. Wilburn & Atkinson, architects, Market-place, Doncaster.

DUDLEY.—The B.G. proposed, subject to the approval of the M.H., to erect on land adjoining Shavers End, Dudley, buildings to be known as the "Rosemary Ednam" Maternity and Nurses' Home, according to plans and specifications prepared by Paine & Hobday, architects. The scheme is estimated to cost about £33,500.

DUNBAR.—The T.C. have under consideration a scheme for the construction of a promenade at St. Anne's.

DUNDEE.—A new parochial hall is to be erected by the congregation of St. Patrick's, estimated to cost £4,000. Mr. R. Fairlie, A.R.S.A., architect, of 7 Ainslie-place, Edinburgh, has prepared the plans. The building will be erected on a site adjoining the church.

EALING.—The E.C. are informed that the B.E. will grant authority in due course for the erection of the proposed new block of buildings at the Grange School.

EASTBOURNE.—The Borough Engineer has prepared lay-out plans for the housing sites at the Crumbles and Hampden Park.—Plans have also been prepared for buildings on the shopping area in Victoria-drive.—Tenders are to be invited for the erection of twelve kiosks on the foreshore in accordance with designs prepared by the Borough Engineer.—The M.H. has requested the B.G. to furnish them with an estimate of the cost of the enlargement of the Infirmary.

FELLING.—The U.D.C. is considering a £190,753 scheme for the provision of 338 houses.

FLEETWOOD.—The T.C. are to proceed with the erection of an additional 80 houses.

FOLKESTONE.—Messrs. Bobby & Co., Margate, propose to build a large branch emporium in Sandgate-road. Reeve & Reeve, architects, of 8, Cecil-square, Margate.

GILLINGHAM.—The T.C. passed plans: R. Thomson, 10 houses, First-avenue; C. J. Varrall, 12 houses, Sturdee-avenue.

GRAYS.—The International Paint & Compositions Co., Ltd., 31, Grosvenor-place, S.W.1, have acquired premises which they propose to adapt and equip for the manufacture of steel drums for the carriage of paints, &c.

GUILDFORD.—The Earl of Middleton and the Bishop of Guildford have discussed with the Corporation the allocation of a site for a cathedral in connection with the new diocese, and have provisionally suggested a site of eleven acres at London-road.—The Guildford Museum governors are proposing to acquire the Castle Arch cottages for the extension scheme.—The Standing Joint Committee are considering the provision of more adequate assize court accommodation.—A site near the railway station is to be obtained for the construction of conveniences.—Watts Memorial Committee have selected design "15" for the memorial to George Frederick Watts, R.A.—Plans passed: Two houses, Grange-road, for Mr. W. G. Sheppard; workshop, Mary-road, for Mr. H. Puttock; workshop, Madrid-road, for Mr. H. Ashenden; additions and alterations, Commerical-road, for Friary, Holroyd & Healy's Breweries, Ltd.

HALIFAX.—Tenders are to be invited by the Improvement Committee, for alterations to premises situate in King Cross-street between Carlton-place and Regent-place.—The Borough Engineer is to invite tenders for the erection of 28 houses at Nursery-lane.—The M.H. has approved the proposals for the erection of 40 houses on the Booth Town.

HAPTON.—The parishioners of St. Margaret's Church are proposing to erect a new edifice. R. Martin, diocesan architect, 90, Deansgate, Manchester.

HARROGATE.—Sanction has been given the Corporation by the M.H. to borrow over £15,000 for the erection of 30 houses in Crab-lane and Bilton-lane in connection with the workmen's dwellings scheme.

HASLINGDEN.—The Housing Sub-committee have recommended that the Clarence site should be purchased for housing purposes.—The Borough Surveyor has submitted sketch plans for the proposed erection of abattoirs at the Town's yard.

HASTINGS.—The Corporation has decided to acquire premises in York Buildings, at a cost of £7,000, for showrooms and offices for the electricity department.—The E.C. are to erect a handicrafts centre at Silverhill, at a cost of £350.—A woodwork centre is to be constructed at Waterloo-place at a cost of £350.—Premises in Wellington-square are to be adapted at a cost of £1,850 for offices for the Borough Accountant's Department.—Broomsgrove House is to be converted into flats at a cost of £1,250.

HIGH HEATON.—The Newcastle City Council has submitted a report relative to a proposed shopping centre, comprising fourteen combined shops and houses to be erected on the High Heaton estate. The site is at the junction of Chillingham-road, Stephenson-road, and Benton-road. The capital cost is estimated at £18,894.

HUDDERSFIELD.—The B.G. has decided to proceed with the erection of a new hospital block to contain 100 beds at the rear of the main buildings of the Crossland Moor Institution. The estimated cost of the scheme is £32,000.

HULL.—The City Architect submitted applications for subsidy:—R. W. Trigg, six parlour-type houses, Westbourne-avenue; W. Watts, nine parlour-type houses, North-road; A. J. Waller, 10 parlour-type houses, North-road.

ILKLEY.—The U.D.C. has a scheme to be carried out in accordance with plans and details prepared by J. M. Gameson, engineer, to complete the erection of an additional 48 houses, together with the construction of the necessary streets, sewers, and water mains, on the Leeds-road.

INCE.—The E.C. are to proceed with the erection of a new Council School at Higher Ince, for which W. C. Ralph & Son are the architects.

KEARSLEY.—The U.D.C. are to erect a steel foot-bridge to replace the dilapidated Wilsons Bridge, at a cost of about £800.

KINGSTON.—It is proposed to develop, for building purposes, the site of 82, Eden-street, and a restaurant, cinema, and row of shops and offices are projected. Mr. A. C. Bonsor, surveyor.

LANCHESTER.—The R.D.C. has received sanction from the M.H. to erect 40 houses at Craghead, and 12 at Ebchester.

LEEDS.—Plans have been prepared for the erection of new buildings at the Weetwood Hall estate, for the University of Leeds, also for a new boiler house at the University. Tenders are being invited in connection with both schemes.—A new road scheme to be known as Easterly-road, has been sanctioned by the M.H., the estimated cost being £37,037; the road will connect Harehills with Gledhow Wood-road.—A large sports pavilion is to be erected on the Military Field at Roundhay, to accommodate 200 players at one time. Facilities to be provided will include dressing rooms, lock-up rooms, hot and cold water installations, conveniences, and other requirements of the players.—The Markets Committee are considering a scheme for the enlargement of the meat market at a cost of £30,000.—The Corporation has obtained sanction for loans of £233,000 for houses, £33,500 for roads on the York-road housing estate. Grants are to be made for the subjoined schemes: Widening Cow Beck bridge, widening Harrogate-road, and extension of Leasowe-road.

LEIGH.—The Lancashire E.C. are to erect a spinning shed in connection with the Technical School, at a cost of £1,700.

LITTLEMOSS.—The Parochial Council of Christ Church has decided to make extensions to their schools for 50 additional scholars. Messrs. Eaton, Sons, & Cantrell, architects, Stamford-street, Ashton-under Lyne.

LONDON (BATTERSEA).—The B.C. has asked the M.H. to approve the purchase of Southlands Training College for £25,000 as a headquarters for the borough health services.

LONDON (CHELSEA).—The M.T. has decided to recognise Chelsea Embankment as a first-class road, and will contribute half the cost of relaying it in concrete.

LONDON (POPLAR).—A scheme is to be prepared for the reconstruction of Mitford bridge over the Regent's Canal, in Wick-lane.—Messrs. Marrable Bros., of Leytonstone, are to build additions at the Labour Exchange at East India Dock-road.

LONDON (ROTHERHITHE).—A mission for Norwegian seamen is to be erected.

LONDON (WANDSWORTH).—The B.C. has approved the plans and sections submitted by J. J. Taylor (on behalf of R. H. Miller & Son) of a road bridge proposed to be constructed over the River Graveney.

LONDON (WOOLWICH).—The B.C. recommend that the Westfield-street sub-station be extended at an approximate cost of £260.—The Council also recommend that application be made to the L.C.C. for sanction to a loan of £31,314, for the erection of 51 houses on the Council's housing estate at Eltham.

LYMM.—The U.D.C. is to make application to the M.H. for sanction to the erection of 20 additional houses at Broom Edge.

MALVERN.—The Finance Committee of the U.D.C. recommended that application be made to the M.H. for sanction to the borrowing for the provision of new foot-bridge over Swan Pool, £130; building of a retaining wall on the east side of Swan Pool, and the making of a terrace garden, £420; four shelters on the top of the retaining wall referred to in the previous item, £320; the erection of a permanent band stand, including foundations, capable of holding 36 performers, £600; and wiring for electricity of the Priory Mansion, to be used as new Council Offices, £220.

MANCHESTER.—Owing to the housing requirements of Manchester a number of sites hitherto used for allotment purposes are to be used for building purposes.

*See also our List of Contracts, Competitions, etc.

MANSFIELD.—Plans have been approved for the erection of a silk hose factory in Sutton-road, for Messrs. Quartex, Ltd (architects, A. E. & T. Sawday, Leicester); conversion of houses into shops and houses, Chesterfield-road, for J. W. Pitchford (architects, Cook, Noward & Lane).

MARGATE.—A scheme has been launched to raise £50,000 for the erection of a new cottage hospital.

MARTLEY.—The R.D.C. recommend that application be made to the M.H. for a loan of £16,000 in connection with the proposed erection of forty houses at Alfrick, Bransford, Broadwas, Doddenham, Hallow North, Leigh, Luisley, Martley, St. John County, and Wickenford.

MEDLAR.—The Parish Council are to erect a fire station, Council room, and offices at a cost of £2,200.

MENSTON.—A site comprising 3½ acres off main street is to be acquired by the Wharfedale R.D.C. for the erection of houses.

MERTHYR.—The Corporation has instructed the Borough Architect to proceed with the erection of 12 houses at Gellifaelog, the estimated cost being £4,750.—Plans have now been prepared for 60 houses at Aberfan.—Tenders are to be invited for the erection of 54 houses at Gellifaelog.—The M.H. are to inquire into the proposal for the acquisition of Old Brewery houses at Gellifaelog, at a cost of £5,000, for the Works Committee.

MORECAMBE.—Mr. J. H. Forshaw, architect of Ormskirk, has prepared his regional town-planning scheme for the town and surrounding districts.—The Corporation has agreed to the plans for the coastal road scheme and in this connection the L.M.S. has agreed to the construction of the proposed bridge at Hest Land, and White Lund is being purchased for the waterworks and refuse disposal departments.—The Borough Engineer has prepared plans for the erection of a mortuary on land adjoining the Victoria Hospital.

NELSON.—The T.C. passed plans: Liptrot, Goodman & Barton, 12 houses, Barkerhouse-road.

NEWCASTLE.—The Corporation has decided to purchase land at Armstrong-road, Scotswood, upon which to erect washhouses and plunge and slipper baths.—The Corporation has decided upon a programme for the erection of 1,455 houses on the Walker estate, the Pendower estate, the High Heaton estate, and the Fenham estate, the total cost being estimated at £720,560. Provisional approval has already been obtained from the M.H., and the Corporation are to obtain tenders for the work as and when deemed desirable—Improvements are to be carried out at the central police court, at a cost of £450.—Automatic street lighting is to be adopted in the east wards at a cost of £4,250.—Improvements are to be made at the firemen's quarters at Westgate, at a cost of £400.—An amended scheme has been agreed to for the erection of a branch library at Scotswood, at a cost of £14,000.

NEWFIELD.—A site has been purchased by the Durham County E.C. for the erection of an elementary school.

NEWSTEAD.—Land for school extension has been purchased by Notts County E.C.

NEWTON ABBOT.—The U.D.C. has received sanction to borrow £55,049 for the purpose of building houses at the Broadlands estate.

OLDHAM.—The T.C. has decided to acquire Greenacres Hall for the establishment of a maternity home. The total cost of alterations, painting, electric lighting, &c., in addition to the purchase price is estimated at £2,082.—The convenience in Greaves-street is to be reconstructed.—A convenience is to be erected at Hollinwood tram terminus.—The managers have prepared plans for improvements at St. Paul's Church Schools.

OSSETT.—The T.C. is to make application to the M.H. for sanction to a loan of £12,578 16s. 10d. in respect of the 24 houses to be erected on the Leeds-road site.

OTLEY.—The U.D.C. have acquired a site at Farnley for a housing scheme.—The U.D.C. has decided to erect 130 houses on the Harefield estate, and tenders are to be invited. Mr. Oswald Holmes is the architect.

OXTED.—The Surrey E.C. has purchased a site for the building of a new county school. Plans by Jarvis & Richards, 60, Tufton-street, Westminster, S.W. 1.

PINNER.—The parishioners of St. Anselm's Church have under consideration the erection of a parish hall at a cost of about £5,000. Plans for a suggested building have been prepared by H. Goslett, F.R.I.B.A., architect, 28, Theobald's-road, W.C.1.

PURLEY.—As a war memorial, it is proposed to double the ward accommodation at the Purley and District General Hospital, at a cost of over £20,000. Messrs. Thompson & Walford, Leadenhall-buildings, Leadenhall-street, E.C. 3, are the architects.

READING.—Plans have been approved by the Justices for the rebuilding of the old public house at Tilehurst, known as the "Bird in Hand," for the owners, H. & G. Simmonds, Ltd., of Reading Brewery. The architect is F. G. Sainsbury, Lic.R.I.B.A., 154, Friar-street.

REDCAR.—A building scheme is in course of preparation providing for the erection of 200 houses on the George Hearse estate.

RETFORD.—The T.C. has made application to borrow a further £4,125 for 55 subsidies.

ROMFORD.—Messrs. Harrington & Evans, architects, submitted to the B.G. an estimate of carrying out certain alterations principally to the old Board Room to find better apartments for the Master, and to the consumptive shelter. The total estimated cost is nearly £400. The scheme has been approved.

ROTHERHAM.—The M.H. has sanctioned the erection of 310 parlour and non-parlour type houses by the R.D.C. The houses are to be erected as follows:—Bramley, 40; Brampton Bierlow, 50; Catcliffe, 10; Dalton, 40; Ravenfield, 50; Thrybergh, 50; Thurcroft, 50; Wickersley, 20. The Council approved the purchase of 25 acres 3 roods 6 poles of land at Thrybergh for £3,685, and 2 acres 1 rood 22 poles at Bramley for housing. According to a plan by Mr. Totty, the architect, 82 houses could be built on a site near Dalton-lane and 200 houses on a site between Doncaster-road and Park-lane, Thrybergh.—The Corporation are borrowing the sum of £35,800 for the purpose of erecting houses.

SEDGEFIELD.—The R.D.C. has acquired land for the erection of 30 houses at Ferryhill, and 20 houses at Chilton-lane.

SHEFFIELD.—The United Methodist Church propose to build a new edifice. Plans are being completed by W. J. Hale, F.R.I.B.A., architect, 13, St. James'-row.—The Sutton Trustees propose to begin immediately the development of an estate which they have acquired. Plans are being prepared for 150 houses.

SHROPSHIRE.—A proposal to build a new chapel at St. Oswald's School, at Ellesmere, is under consideration as a war memorial measure. Plans have been prepared by Sir Aston Webb, P.-P.R.A., 19, Queen Anne's-gate, S.W.1.

SLOUGH.—Plans have been approved for the construction of a petrol-filling and service station, garage and house on a site on the Bath-road. Mr. C. E. Hanscomb, F.R.I.B.A., architect, Station Approach, Sanderstead.

SOMERSET.—It is proposed to carry out a scheme of renovation to the Furnhall Church at Chard, to the plans of C. C. Winmill, 2, Elliot-place, Blackheath, S.E.

SOUTHALL.—Plans have been passed by the U.D.C. for a factory at Windmill-lane, for the Associated Equipment Co., and for a Salvation Army Hall at Uxbridge-road.

SOWERBY BRIDGE.—The U.D.C. are to make application to the M.H. for sanction to borrow £6,800 for the erection of 16 houses on the Willow-street housing site (Stansfield-court and Old Causeway improvement scheme), and also for sanction to borrow the sum of £4,000 for the erection of nine houses on the Willow-street housing site. It has been agreed that the 18 smaller type of houses, to be erected on the Willow-street site, be fitted with gas light.

STALYBRIDGE.—The B.E. has now empowered the E.C. to proceed at once with the proposal for adapting buildings at West Hill for school purposes.

STANDISH.—Messrs. Almond's Brewery Co. are proposing to reconstruct and modernise the "Horse Shoe" public house. The plans are being prepared by W. C. Ralph & Son, architects, King-street, Wigan.

STOKE-ON-TRENT.—The City Council has decided to appropriate the Palais de Danse site for the erection of a central museum and art gallery.—The Mental Deficiency Committee recommend the Corporation to provide increased accommodation for defectives.—In connection with the conversion of privies the Corporation are to invite tenders for 1,500 closet sets.—The City Engineer has prepared plans for the extension of Hanley Market.—The City Engineer has prepared a scheme for the reconstruction of Burslem Old Town Hall at a cost of £7,250.—Housing sites are being obtained at Goldenhill and Norton.—Plans have been prepared for the lay-out of the housing site at Hanford.—Further housing sites are to be obtained at Trentham and Trent Vale.—Terms have been arranged with the L.M.S. for the erection of a new bridge at Cromer-road, Hanley.—Public conveniences are to be erected near the Court House, Longton.

STRATFORD.—A new elementary school is to be built at a cost of £33,000.

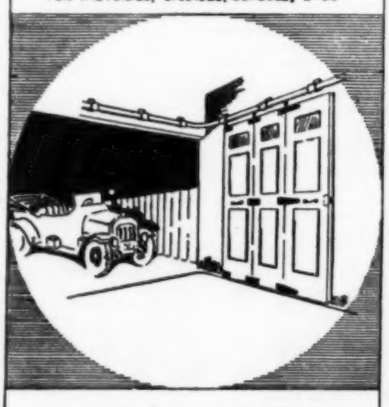
SUTTON.—A loan of £46,300 has been sanctioned for the building of a large secondary school for boys by the Surrey E.C. Messrs. Jarvis & Richards, architects, 60, Tufton-street, Westminster, S.W. 1.

SWINDON.—The T.C. approved plans: A. J. Colborne, two houses, Shrivenham-road, house and shop, corner of Bathurst-road, 14 houses, Northampton-street, 16 houses, Westmoreland-road, and 34 houses Drove-road.

THE "HENDERSON" SYSTEM

SLIDING DOOR GEAR

FOR FACTORIES, GARAGES, SCHOOLS, ETC.



"TANGENT JUNIOR" FOR LIGHT DOORS.
"TANGENT SENIOR" FOR HEAVY DOORS.

WRITE FOR BOUND CATALOGUE B.24 TO:-

P.C.HENDERSON, LIMITED.

BARKING, ESSEX. PHONE: EAST HAM 843

THIRSK.—Plans have been passed for proposed extensive alterations to the Picture House.

TORQUAY.—The E.C. urge for the reservation of a site at Hele for the erection of an elementary school in view of building developments in the neighbourhood.—The Corporation has purchased 36 acres of the Cary estate for housing purposes.—Four blocks of flats and 42 houses are to be erected at Barton-road.—Mr. J. Sture has prepared a scheme for the erection of 20 houses at Newton-road.—The T.C. passed plans: Twenty-four houses, Cary Park-road, for F. C. Martin.

TYNEMOUTH.—The Corporation are negotiating for 18 acres at Cullercoats for a housing scheme.

UCKFIELD.—The Works Committee recommend that plans be approved for the erection of twenty-eight cottages, at Poundfield, for A. H. Clough.

USWORTH.—The Durham County E.C. has purchased a site at the colliery for the erection of an elementary school.

WAKEFIELD.—Further land at Lupset is to be purchased for housing.—Plans are under consideration for increased accommodation at the municipal offices.

WALSALL.—The T.C. proposes to spend £500 in carrying out improvements at the Public Baths in Tower-street.—Application is to be made by the T.C. to the M.H. for sanction to borrow £7,330 for the erection of the 12 houses on the Lincoln-road site.

WARRINGTON.—Extensions are proposed at the Longford Gas Works, which are estimated to cost £42,500.

WATFORD.—The Corporation are to invite tenders for painting 200 Council houses.—A scheme for the erection of 22 tenant-purchase houses on the Harebreaks estate is to be prepared.—Messrs. Benskins are to erect an hotel on the main road at Longspring.—The Borough Engineer has prepared plans for sewerage on the Cassiobury estate, at a cost of £37,000.

WEST RIDING.—The following land drainage schemes have been approved by the Ministry of Agriculture:—(1) Thornton-in-Craven—Stock Bridge Laithe; (2) Weeton, Dunkeswick, and Rigton; (3) West Haddlesey—River Aire banks; and (4) Brayton, Selby.

WESTON-SUPER-MARE.—The plans prepared by T. A. Pole, F.R.I.B.A., 10, Gray's Inn-square, W.C., have been approved for the building of the new war memorial wing at the Hospital. The building and its equipment is estimated to cost £30,000, and provision will be made for 54 additional beds with requisite staff accommodation.

WHITBY.—The U.D.C. has approved a scheme which includes the enclosing of the eastern end of the Spa Grounds between the theatre and the new band pavilion at an estimated cost of £3,000. This will provide additional accommodation for about 400 people.

WIGAN.—In regard to Wrightington Hall, near Wigan, and 169 acres of land, the Tuberculosis Committee of the Lancashire C.C. have requested the County architect, H. Littler, 16, Ribbledale-place, Preston, to prepare the plans and estimates of five new pavilions, the present hall being adapted and enlarged for the purpose of an administration block and providing 226 beds, i.e., 80 beds for adults and 146 beds for children. The scheme is to be submitted to the M.H. for sanction.

WILLESDEN.—The M.H. has sanctioned the borrowing for Oxgate-lane sub-station and Gibbons-road receiving station, £27,495, and electricity buildings, £8,152.—The Council are to make application to the Electricity Commissioners for sanction to borrow £5,000 for the construction of certain buildings at the rear of 21 and 22, College-parade.—The Council also recommend the establishment of a clinicat Stonebridge on the site reserved for the purpose on the Brentfield estate.—Plans passed: Ten houses, with garages, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, Dollis Hill-lane, Cricklewood, for F. W. Brealy; 26 lock-up garages, rear of St. Mary's-road, Harlesden, by H. Shaw, for G. Whitehead; factory premises, Whitley-avenue, Park Royal, Willesden, by W. Bridges & Co., for The Indestructible Paint Co.; 57 houses, 2 to 56 and 1 to 57 inclusive, Whitmore-gardens, Kensal Rise, for G. Ball (Willesden), Ltd.; and factory, Dudden Hill-lane, by The Willesden Building and Construction Co., for York Shipley, Ltd.

WIMBLEDON.—The Corporation has now obtained a site in Hubert-road for the erection of a day nursery.—Improvements are to be made at the offices of the electricity works, at a cost of £200.—The Borough Engineer is to prepare a scheme for widening Ashcombe-road bridge for submission to the M.T.

WINCHESTER.—Messrs. Haynes, Johnson & Ebbs have been commissoned by the R.D.C. to prepare plans and specifications, and to obtain provisional tenders for the erection of approximately 89 houses.

WORCESTER.—The City Council has adopted the scheme of the Markets Committee for improvements at the cattle market at an estimated cost of £9,825.—The City Council were informed that Archdale & Co. are about to start work at a new factory.

WORKSOP.—The U.D.C. has decided to borrow £6,000 for the purchase of land for housing purposes.

WORTHING.—The T.C. has passed plans for 17 houses, Nutbourne-road, for S. E. Merredew.

YORK.—The Bank of Liverpool & Martin, Ltd., have acquired premises in New-street for conversion into a bank. The Tadcaster Brewery Co., Ltd., are to erect a public house at Frog Hall, Layerthorpe. A modified scheme is to be prepared for extensions at the fever hospital. Twelve houses for displaced tenants are to be erected at Melrosegate. Plans are to be prepared for converting premises in Museum-street for library purposes. Tool sheds are to be erected on housing estates at a cost of £3,000. The river bank from Lendal bridge to Scarboro' bridge is to be improved at a cost of £1,900.—The T.C. passed plans: J. Rowntree Trust, 12 houses, Clifton Lodge estate, and H. Williamson, 9 houses, Siward-street.

FIRE.

ABERDEEN.—Damage estimated at between £20,000 and £25,000 was caused by a fire which broke out in the sawmill of W. Fiddes & Sons, Ltd., packing box and barrel manufacturers at Torry

PRICES CURRENT OF MATERIALS

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry —Ed.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 3 6
Second Hard Stocks	3 18 6

Per 1,000. Delivered at London Goods Stations.

Flettons, at	£ s. d.		£ s. d.
King's Cross	2 13 3	Best Blue Pressed Staffs	9 5 0
Do. grooved for Plaster	2 15 3	Do. Bullnose	9 15 0
Do. Bullnose	3 8 3	Blue Wire Cuts	7 5 0
Best Stourbridge Fire Brick :—			
2½ in.	8 11 0	3 in.	10 3 0

GLAZED BRICKS—

Best White Ivory, and Salt Glazed Stretchers	21 10 0	D'ble Str'tch'rs	30 0 0
		D'ble Headers	27 0 0
		One Side and two ends	31 0 0
Headers	21 0 0	Two Sides and one End	32 0 0
Quoins, Bullnose and 4½in. Flats	28 0 0	8 plays and Squints	29 10 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.
Delivered London.

	s. d.		s. d.
2 in. per yd. super	1 11	3 in. per yd. super	2 9
2½ in. " "	2 4	4 in. " "	3 6

	s. d.	
Thames Ballast	10 6 per yd.	delivered 2 miles radius Paddington.
Pit Sand	13 9 " "	
Thames Sand	14 6 " "	
Best Washed Sand	14 6 " "	
½ in. Shingle for Ferro-Concrete	12 9 " "	
½ in. "	14 0 " "	
½ in. Broken Brick	11 6 " "	
Pan Breeze	7 6 " "	

Per ton delivered in London area in full van loads.

Best Portland Cement. British Standard Specification. Test £2 18 0 to £3 3 6 51s. alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0 10 0
Super Cement (Waterproof)	4 8 0
Roman Cement	8 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
" " Pink	5 10 0
Plaster, Coarse, Pink	3 0 "
" " White	3 12 6
" Fine	5 12 0
Strapite, Coarse	3 9 0
" Finish	3 17 0
Grey Stone Lime	2 11 9
Chalk Lime	2 11 9
Best Ground Blue Lias Lime	2 4 6
Hair	32 0 0
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.

Stourbridge Fireclay in s'cks 35s. 0d. per ton at rly. dp.

STONE.

BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube.... s. d. 2 9½

Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube..... 2 11½

PORTLAND STONE—
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, L. & S.W.R., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube..... 4 4

Do. do. delivered on road wagons at above stations, per ft. cube..... 4 5

White basebed, 3d. per ft. cube extra.

NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE—
Delivered at any Goods Station, London. s. d.

Small random blocks, up to 10 ft. cube. P. ft. cb.	7 0
Random blocks from 10 ft. and over "	17 0
Sawn two sides "	27 0
Sawn three or four sides "	32 0

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station, London. s. d.

6 in. sawn two sides landings to sizes (under 36 ft. super.) Per ft. super	5 6
6 in. rubbed two sides, ditto "	6 0
3 in. sawn two sides slabs (random sizes) "	2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) "	1 6½
1¼ in. to 2 in. ditto, ditto "	1 4

HARD YORK—
Delivered at any Goods Station, London.

Scappled random blocks Per ft. cube	6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) Per ft. super	5 1½
6 in. rubbed two sides, ditto "	6 1½
4 in. sawn two sides slabs (random sizes) "	2 10
3 in. ditto ditto "	2 1½
2 in. self-faced random flags.... Per yd. super	9 0

ARTIFICIAL STONE.

Delivered in London Area in full van loads, per ft. cube :—Plain, 8s. 6d. ; Moulded, 9s. 6d. Cills, 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£28 0	3 × 6	£21 0
4 × 9	25 0	3 × 11	25 0
4 × 8	24 0	2 × 11	25 0
4 × 7	23 0	3 × 9	24 0
3 × 8	21 0	2½ × 9	23 0
3 × 7	20 0	3 × 4½	22 0
2½ × 7	20 0	3 × 4	22 0

PLANED BOARDS.

1 × 11	£27 0	1 × 9	£26 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
¾	20/-	1¼	31/-
¾	22/-	1½	34/-
1	25/-		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.	Inches.	per sq.
1	25/-	¾	16/6
1¼	31/-	¾	19/-
1½	34/-	1	24/-

MATCHING (BEST).

Inches.	BATTENS.	s. d.
¾ × 2		2 6 per 100 ft.

SAWN LATHS.

Per bundle	0 2 4

1" AND UP THICK.

	£ s. d.		£ s. d.
Dry Austrian Wainscoat, per ft. cube	0 16 0	to 0 18 0	
Dry American and /or Japanese Figured Oak, ft. cube	0 15 0	to —	
Dry American and/or Japanese Plain Oak, ft. cube	0 11 0	to 0 13 0	
Dry sq. edged Honduras Mahogany, ft. cube	0 16 0	to 0 18 0	
Dry Log cut Honduras Mahogany, ft. cube	0 18 0	to 1 1 0	
Dry Cuba Mahogany, ft. cube	1 4 0	to 1 10 0	
Dry Teak, ft. cube	0 13 0	to 0 15 0	
Dry American Whitewood, ft. cube	0 11 0	to 0 14 0	
Best Scotch glue, per cwt.	4 10 0	to —	
Liquid Glue, per cwt.	4 7 0	to 5 10 0	

SLATES.

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 of 1,200.

	£ s. d.		£ s. d.
24 by 12	37 12 6	18 by 10	21 2 6
22 by 12	34 0 0	18 by 9	18 12 6
22 by 11	31 5 0	16 by 10	17 12 6
20 by 12	29 15 0	16 by 8	13 15 0
20 by 10	25 12 6		

TILES.

	Per 1,000 f.o.r. London.
Best machine-made tiles from Broseley or Staffordshire district	5 12 6
Ditto hand-made ditto	5 17 6
Ornamental ditto	6 2 6
Hip and valley tiles (per dozen) Hand-made	0 9 6
Hip and valley tiles (per dozen) Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &C., TO LONDON STATION, PER TON—

	£ s. d.
R.S. Joists, cut and fitted	12 10 0
Plain Compound Girders	14 10 0
" Stanchions	16 10 0
In Roof Work	19 10 0

MILD STEEL ROUNDS.
To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	12 0 0	⅜ in. to ½ in	10 15 0
⅜ in.	11 0 0	⅝ in. to 2½ in	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward if sent from London Stocks.)

	Tubes.	Fittings.	Flanges.
Black Gas	60 %	50 %	60 %
Galvanised Gas	45 %	40 %	50 %
Blue Water	55 %	45 %	55 %
Galvanised Water	38½ %	35 %	45 %
Red Steam	50 %	40 %	50 %
Galvanised Steam	32½ %	30 %	40 %

C.I. HALF-ROUND GUTTERS—London Prices, ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/2½	11½d.	3½d.
3½ in.	1/4	1/0½	3½d.
4 in.	1/5	1/2½	3½d.
4½ in.	1/6½	1/4	4½d.
5 in.	1/9½	1/5½	5½d.

O.G. GUTTERS.

3 in.	1/7	1/3½	3½d.
3½ in.	1/7	1/3½	3½d.
4 in.	1/8½	1/4	3½d.
4½ in.	1/10½	1/6½	4½d.
5 in.	2/3	1/9½	5½d.

RAIN-WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain	1/0½	1/2½	1/8½
2½ in. "	1/11½	1/4	2/0½
3 in. "	2/4½	1/8	2/6
3½ in. "	2/10	2/-	2/10½
4 in. "	3/3	2/4½	3/6

L.C.C. COATED SOIL PIPES—London Prices, ex Works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6 fts. plain	2 11	2 3	2 9
2½ in. "	3 5	2 6	3 5
3 in. "	4 1	2 9	4 0½
3½ in. "	4 5½	3 5	4 8½
4 in. "	4 11½	3 9½	5 5½

L.C.C. COATED DRAIN PIPES—London Prices ex Works.

	Pipe.	Bends, stocks angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
3 in. per yd. in 9 ft. lengths	4 3	5 9	7 8
4 in. " "	6 3	6 11	9 6
5 in. " "	7 10	12 0	16 3
6 in. " "	9 6	15 0	20 9

Gaskets for jointing, 38/6 per cwt.

	Per ton in London. £ s. d.		£ s. d.
IRON—			
Common Bars	13 0 0	to	14 10 0
Staffordshire Crown Bars—good merchant quality	14 5 0	—	15 5 0
Staffordshire "Marked Bars"	16 5 0	..	17 5 0
Mild Steel Bars	10 0 0	..	11 0 0
Steel Bars, Ferro-Concrete quality, basis price	10 0 0	..	11 0 0
Hoop iron, basis price	12 0 0	..	13 0 0
" Galvanised	27 0 0	..	28 0 0
Soft Steel Sheets, Black—			
Ordinary sizes to 20 g.	13 5 0	..	14 5 0
" " " 24 g.	14 5 0	..	15 5 0
" " " 26 g.	16 5 0	..	17 5 0
Sheets Flat Best Soft Steel, C.R. & C.A. quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0	..	16 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	16 10 0	..	17 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	18 10 0	..	20 10 0

No. 1 quality £4 per ton extra.

Flat and Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	18 10 0	..	19 10 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	19 0 0	..	20 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	22 0 0	..	23 0 0
Sheets Galvanised Flat. Best quality—			
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	22 0 0	..	23 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	24 0 0	..	26 0 0
Best Soft Steel Sheets, 26 g.	25 0 0	..	26 10 0
Cut Nails, 3 in. to 6 in.	19 0 0	..	20 0 0

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet, English, 4 lb. and up	45 10 0
Pipe in coils	47 0 0
Soil Pipe	49 0 0
Compo Pipe	50 0 0

NOTE—Country delivery, 30s. per ton extra ; lots under 3 cwt., 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 2s. cwt. extra.

Old lead, ex London area, at Mills per ton	31 10 0	—
Do., ex country, carriage forward per ton	32 10 0	—

COPPER.

	s. d.
Seamless Copper tubes (basis) per lb.	1 1
Strong sheet "	1 0
Thin "	1 1
Copper nails "	2 3
Copper wire "	2 4

PLUMBERS' BRASS WORK.
Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62*-	92/-	174/-	300/-	588/- per doz.

NEW RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz.

CAPS AND SCREWS.

1½ in.	1¼ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

1½ in.	1½ in.	2 in.	3 in.
8 lbs. P. traps	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps	35/-	45/-	66/-	126/- "

TIN—English Ingots, 2/9 per lb. SOLDER—Plumbers' 1/2, Tinmen's 1/5. Blowpipe 1/6 per lb.

PAINTS, &c.

	£ s. d.
Raw Linseed Oil, in pipes per gallon	0 3 1
" " " in barrels "	0 3 3
" " " in drums "	0 3 6
Boiled " " in barrels "	0 3 6
" " " in drums "	0 3 9
Turpentine in barrels "	0 5 6
" in drums (10 gall.) "	0 5 8
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)	55 15 0
GENUINE WHITE LEAD PAINT— "Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J." Brand and other best brands (in 14 lb. tins) not less than 5 cwt. lots per ton delivered	75 15 0
Red Lead, Dry (packages extra) per ton	49 0 0
Best Linseed Oil Putty per cwt	0 15 0
Filocol "	0 15 6
Size. XD Quality fkn	0 3 6

Continued on next page

*The information given on this page has been specially compiled for THE BUILDER and is copyright. Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*)

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per Ft.		Per Ft.
15 oz. fourths ..	3½d.	32 oz. fourths	8d.
15 „ thirds	4½d.	32 „ thirds	9½d.
21 „ fourths ..	4½d.	Obscured Sheet, 15 oz.	4d.
21 „ thirds	5½d.	„ „ 21 „	5½d.
26 „ fourths ..	5½d.	Fluted 15oz. 6½d., 21oz. 9½d.	
26 „ thirds	7½d.	En'lled 15oz. 5½d., 21oz. 7½d.	

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
¼ Rolled plate	4½d.
⅜ Rough rolled	5½d.
½ Rough rolled	5½d.
Figured Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White..	6½d.
Ditto, tinted	9d.
Rolled Sheet	6d.
White Rolled Cathedral	5½d.
Tinted do.	7½d.

Cast Plate is same price as rough rolled.

VARNISHES, &c.

		Per Gallon. £ s. d.
Oak Varnish.....	Outside	0 14 0
Fine ditto.....	ditto	0 16 0
Fine Copal	ditto	0 18 0
Pale Copal	ditto	1 0 0
Pale Copal Carriage	ditto	1 4 0
Best ditto.....	ditto	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	ditto	0 18 0
Fine Copal Cabinet	ditto	1 2 6
Fine Copal Flatting	ditto	1 0 6
Hard Drying Oak	ditto	0 18 0
Fine Hard Drying Oak.....	ditto	0 19 0
Fine Copal Varnish	ditto	1 0 0
Pale ditto	ditto	1 2 0
Best ditto	ditto	1 12 0
Best Japan Gold Size		0 12 6
Best Black Japan		0 10 6
Oak and Mahogany Stain (water).....		0 12 0
Brunswick Black.....		0 7 6
Berlin Black		0 14 6
Knotting (patent)		1 5 0
French and Brush Polish		0 17 0
Liquid Dryers in Terebine		0 9 0
Cuirass Black Enamel		0 7 0

Southend Proposed Hospital.

Southend County Borough proposes to erect a new hospital at an estimated cost of £100,000.

Birmingham Town Hall.

It is stated that Birmingham City Council has decided to carry out reconstruction work at the Town Hall, at a cost of £37,000.

Proposed New Surrey Railway.

The Southern Heights Railway proposes to construct a railway from Orpington to Sanderstead, a distance of 13 miles, at an estimated cost of over £500,000. The widening and strengthening of many bridges is involved.

Widening Peterborough Main Street.

Having secured Parliamentary approval, Peterborough Corporation is now taking definite steps in regard to the scheme for widening Narrow-street. The work of reconstruction and widening is expected to take ten years and to cost over £200,000.

London Housing Improvement Scheme.

The City Corporation has acquired land in Shepherdess-walk, Turner's-place and Wenlock-road, at a cost of £30,000, for the purpose of providing alternative accommodation for persons dispossessed from houses within the City.

New Model Village near Doncaster.

Lord Gainford, vice-chairman of Messrs. Pease & Partners, Ltd., owners of Thorne Colliery, states that the company intends spending a million pounds on the provision of houses at the new colliery village at Thorne. A school, churches, chapels, and recreation grounds are also to be provided for an expected population of 11,000.

Historic Castles for the Nation.

Two of the ancient southern castles of Great Britain, Pevensey Castle and Porchester Castle, have recently been given by their owners to the nation. The Commissioners of Works have been entrusted with the administration and care of these fortresses, and operations for the preservation of the structure of Pevensey Castle are already in progress. Work of a similar character will be begun shortly at Porchester.

THE SCOTTISH BUILDER

NEW BUILDINGS IN SCOTLAND

Glasgow.—HOUSES.—An order for 42 steel houses, to be erected at Garngadhill, Glasgow, has been given Messrs. Weir, Ltd., by the Scottish National Housing Co., Ltd.

Glasgow. — HALL. — Mr. M. Waterhouse, F.R.I.B.A., Staple Inn Buildings, High Holborn, W.C.1, has been commissioned to prepare the plans for the proposed hall for students at the St. Andrew's University.

Cannock.—HALL.—A new public hall is to be erected in Market Hall-street.

Greenock.—STATION.—The L.M.S. Rly. Co. propose to erect a new station, and it is understood that they favour a site in the vicinity of Hole Farm, on the Wemyss Bay line.

Perth.—HOUSES.—Eighty-four houses are to be erected at Pitheavlis, and the remainder on sites not yet definitely fixed. The Town Council are also to proceed with the erection of 52 Atholl steel houses.

Peterhead.—HOUSES.—The Town Council has decided to proceed with the erection of another two blocks, consisting of eight houses of three apartments each, the estimated cost being £3,750.

Motherwell.—ALTERATIONS.—The Dean of Guild Court passed plans: Lanarkshire E.C., alterations and extensions to the property at Abbot-street by the erection of a drawing office, at an estimated expenditure of £850.

Kelvin.—BRIDGE.—Preliminary arrangements have been made in connection with the proposal for the construction of a new bridge in Glasgow over the River Kelvin. The Statute Labour Committee of the Corporation has decided to recommend that the Corporation advertise for offers and designs for a ferro-concrete structure faced with red freestone and with granite parapets, to replace the present Queen Margaret Bridge in the neighbourhood of the Botanic Gardens. The cost of the proposed bridge is provisionally estimated at £80,000. The width of the new Kelvin bridge will be 80 ft. from parapet to parapet.

Hawick.—HOUSING.—The Town Council has decided to acquire from the Duke of Buccleuch a building site for houses on the Buccleuch-road, extending to over five acres, at £400 per acre.

Hamilton.—HOUSES.—The Dean of Guild Court has passed plans presented by the Scottish National Housing Co., for 50 Cowieson houses.

Edinburgh.—SHELTERS.—For the provision of shelters and other accommodation in certain public parks, the Parks Committee of the Town Council has put forward ten proposals, involving a cost of £8,430. It has been agreed that the accommodation proposed for Davidson's Mains (£800), Hillend (£850), and Blackford (£130) should be provided for in the estimates for this year.

Aberdeen Society of Architects.

At the twenty-eighth annual general meeting of the Aberdeen Society of Architects, Mr. J. B. Nicol was reappointed president. The other members of council of the society for the ensuing year were elected as follows:—Past-president, Mr. R. G. Wilson, jun.; vice-president, Mr. Clement George; members, Messrs. W. L. Duncan, A. B. Gardner, W. E. Gauld, A. H. L. Mackinnon, H. Maclennan, D. S. M'Millan, R. L. Rollo, J. W. Walker, and G. Watt; secretary and treasurer, Mr. W. E. Levie.

Obituary.

The death has occurred of Mr. Edward Ellice Pearson, architect and surveyor, of 27, Rutland-street, Edinburgh.

BUILDING TRADE WAGES IN SCOTLAND.*

THE following are the present rates of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur:—

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons', Bricklayers', Plasterers'.
Aberdeen	1/8	1/8½	1/8	1/8	1/8	1/8	1/7	10½d. to 1/1
Airdrie	1/8	1/8	1/8	1/8	1/8	—	1/6½	1/3
Alexandria.....	1/8	1/8	1/8	1/8	1/8	1/8	—	1/2½ to 1/3½
Arbroath	1/7	1/7	1/7	1/7½	1/7	1/7	1/5½	1/1½
Ayr	1/8	1/8	1/8	1/8	1/8	1/8	1/6½	1/3
Bathgate	1/8	1/8	1/8	1/8½	1/8	1/8	1/6½	1/2 to 1/3
Blairgowrie	1/7	1/7	1/7	1/7½	1/5	1/7	1/4	10d. to 1/-
Bo'ness	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3
Coatbridge.....	1/8	1/8	1/8	1/8	1/8	—	1/6½	1/3 to 1/3½
Dumbarton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Dumfries	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Dundee	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3
Dunfermline	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Edinburgh	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Falkirk	1/7½	1/7½	1/7	1/8	1/7	1/7	1/6½	1/2½
Fort William.....	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2
Galashiels	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Glasgow	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Greenock	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/0½ to 1/3½
Hamilton	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3½
Hawick	1/7	1/7	1/7	1/7-1/7½	1/7	1/7	1/7	1/2½
Helensburgh	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/3½
Inverness	1/5	—	1/5	1/4	1/5	1/5	1/4	1/- to 1/2
Kilmarnock	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Kirkcaldy	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Kirkwall.....	1/5	1/5	1/4	1/5	1/5	1/4	1/4	1/-
Lanark	1/8	1/8	1/8	1/9	1/8	1/8	1/6	1/0 to 1/3
Leith	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Motherwell.....	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3½
Perth	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3
Stirling	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Stirlingshire (Eastern District)	1/8-1/10	1/8-1/10	1/8	1/9	1/7	1/8	1/6½	1/3½
Wishaw	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/3½

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 449.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	0
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundation 1 to 6	per yard cube	32	0
Add if in underpinning in short lengths	" "	7	0
Add if in floors 6 in. thick	" "	3	3
Add if in beams	" "	3	9
Add if aggregate 1 : 2 : 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	6

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	10	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

		s.	d.
Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

		s.	d.
Extra only to the price of ordinary brickwork :—			
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard sup.	4	3
Three-quarter-inch vertical damp course	" "	8	6
¾ inch on flats in two thicknesses	" "	6	3
Angel fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	2

MASON.

		s.	d.
York stone templates fixed	per foot cube	13	0
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Portland stone fixed	" "	20	0

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	5	0
Do. joists	" "	5	6
Do. roofs, floors, and partitions	" "	6	0
Do. trusses	" "	8	6

		¾"	1"	1¼"	2"
Deal rough close boarding	per sq.	35/6	40/-	45/-	72/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	1	0
Centres for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

		¾"	1"	1¼"	1½"
Deal-edges shot	per sq.		44/6	53/-	60/6
Do. tongued and grooved	"		49/-	57/6	65/-
Do. matchings	"	45/-	51/-		
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/0	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super.	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights; average size	" "	8	9

DOORS.

		1½"	1¾"	2"
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	"	2/5	2/8	2/11
Two-panel moulded both sides	"	2/8	2/11	3/2
Four-panel Do. Do.	"	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	"	1/4	1/6	1/9
Add if cross-tongued	"	2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail: average 3 in. × 3 in.	" "	6	0
Add if ramped	" "	11	10
Add if wreathed	" "	23	9

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	"	19	0
Do. stanchions	"	21	9
In roof work	"	27	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/6	1/9	2/-	2/6
Ogee Do. Do.	"	1/9	2/-	2/6	3/3
Rain-water pipes with ears	"	1/9	2/7	—	—
Extra for shoes and bends	each	4/4	5/11	—	—
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	60	0
Do. Do. in flats	"	59	0
Extra labour and solder in coated cesspools	each	6	9
Welf joint	per ft. run	0	6
Soldered seam	" "	1	6
Copper nailing	" "	0	6

		½"	¾"	1"	1¼"	2"	4"
Drawn lead waste	per ft. run	1/2	1/9	2/-	3/4	4/-	—
Do. service	"	1/8	2/2	2/7	3/10	—	—
Do. soil	"	—	—	—	—	—	6/9
Bends in lead pipe	each	—	—	—	—	3/3	8/2
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	—
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"	—	—	—	14/7	19/6	—
Bib cocks and joints	"	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints	"	15/4	17/2	25/8	64/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	4
Do. Do. Sirapite	" "	2	7
Do. Do. Keen's	" "	3	7
Add sawn lathing	" "	1	7
Add metal lathing	" "	2	6
(Not including hangers or runners, &c., for suspended ceilings.)			
Portland cement screed	per yard sup.	2	2
Do. plain face	" "	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	9

GLAZIER.

		s.	d.
21 oz. sheet plain	per foot sup.	0	8½
26 oz. Do.	" "	1	0
Obscured sheet	" "	1	1
⅛ in. rolled plate	" "	0	9
¼ in. rough rolled or cast plate	" "	0	10½
¼ in. wired cast plate	" "	1	4

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	"	1	2
Preparing for and hanging paper	per piece, 2/- to	4/-	

* These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10 % on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

NEW COMPANIES

THE particulars quoted below have been compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, of 116 and 118, Chancery-lane, W.C.2, from the documents available at the Companies' Registry.

A. H. DUNCALFE, LTD. (210,993). Registered January 8. Builders', plumbers', decorators', and glass merchants, oil and colour merchants, glaziers, &c. Nominal capital, £7,500.

JOHN HIGGINBOTTOM & SONS, LTD. (210,959). Registered January 7. Ironmongers, builders, &c. Nominal capital, £7,000.

T. & G. SPRAGG, LTD. (210,967). Registered January 7. 1B, King Edward-road, Swansea. Builders, building contractors, timber and builders' merchants, &c. Nominal capital, £1,000.

BECKENHAM DEVELOPMENT CO., LTD. (210,976). Registered January 8. 133, Brighton-road, Purley. Builders and contractors, &c. Nominal capital, £2,500.

LLWYN EINION SHALE BRICK CO., LTD. (211,062). Registered January 13. 708, New Chester-road, Rock Ferry, Birkenhead. Manufacturers of bricks, tiles, pipes, &c. Nominal capital, £10,000.

J. C. PATON & CO., LTD. (211,111). Registered January 15. 11, Narrow Quay, Bristol. Builders' merchants, manufacturers' agents, &c. Nominal capital, £3,000.

RATTEE & KETT, LTD. (211,064). Registered January 13. Station-road, Cambridge. Contractors for the construction of works, mines, stone quarriers and dressers, &c. Nominal capital, £30,000.

GOUGH & GURNEY, LTD. (211,079). Registered January 13. Builders and contractors for the erection and repair of houses, dwellings, &c. Nominal capital, £5,000.

W. R. PICKUP, LTD. (211,086). Registered January 13. Manufacturers of and dealers in enamelled fire clay, earthenware goods, sanitary, drain, and other pipes, &c. Nominal capital, £100.

HAMMOND, EASTES & CO., LTD. (211,092). Registered January 14. Builders and contractors, &c. Nominal capital, £1,500.

M. BARRETT, LTD. (211,096). Registered January 14. Builders, decorators, &c. Nominal capital, £5,000.

STOREY & SMITH, LTD. (211,161). Registered January 18. 156, Edmund-street, Birmingham. Slaters and tilers, &c. Nominal capital, £100.

CARRINGTON, THOMAS & CO., LTD. (211,134). Registered January 16. Builders, plumbers, decorators, &c. Nominal capital, £3,000.

INTERNATIONAL HOUSING TRUST (FOUNDATION CO.), LTD. (210,804). Registered December 31, 1925. Process and methods of the Lambie Concrete House Corporation, of Cleveland, Ohio, U.S.A., to effect registration of a larger company, &c. Nominal capital, £20,000.

IDEAL HOUSES (WOLVERHAMPTON), LTD. (211,263). Registered January 22. To acquire land and to erect houses, &c. Nominal capital £1,000.

LIMEOMAC QUARRIES, LTD. (211,207). Registered January 20. Quarry masters and stone merchants, &c. Nominal capital, £8,000.

WILFRED GRAHAM, LTD. (211,247). Registered January 21. 4, Curate-street, Stockport. Builders, contractors, &c. Nominal capital, £1,000.

ALFRED HODKINSON, LTD. (211,121). Registered January 16. 62, Greenhill-street, Chorlton-on-Medlock, Manchester. Builders and contractors. Nominal capital, £10,000.

TWICKENHAM ESTATES, LTD. (211,215). Registered January 20. 52, Queen Victoria-street, E.C.4. Builders and contractors, &c. Nominal capital, £100.

JACKLIN, KELLY & CO., LTD. (211,206). Registered January 20. To take over the business of builders and contractors, &c. Nominal capital, £10,000.

P. ELLIFF & SONS, LTD. (211,209). Registered January 20. 36, The Calls, Leeds. Stained glass artists, &c. Nominal capital, £100.

TRADE NEWS

Mr. Barry E. Harris, son of Mr. Barry J. Harris, is no longer associated with the firm of Battiscombe & Harris. His offices and works are at 37, St. Barnabas-street, Victoria, S.W.1, where he is continuing the same class of business, associated with his father's name and his own for so many years.

The Ransome Machinery Co., Ltd., of Windsor House, 46, Victoria-street, S.W.1, have received an order from Messrs. Sir Robert McAlpine & Sons, public works contractors, for four of their "Welterweight" concrete mixers.

Exhibition of Film and Lantern Slides.

We are informed by the National Radiator Co., Ltd., that the proposed exhibition of film and lantern slides at the Municipal Technical College, Blackburn, recently referred to in *The Builder*, had to be postponed owing to circumstances beyond their control. It has now been arranged for the exhibition to be given on Monday, March 15.

Domestic Boiler.

We have received a folder from Messrs. James Keith & Blackman, Ltd., of 27, Farringdon-avenue, E.C.4, dealing with their "Pilot" domestic boiler, which has been specially designed for the average-sized house, bungalow or flat. It is claimed that the boiler will provide 35 gallons of hot water per hour at 150 deg. Fahr., and that for all services its fuel consumption is about 1¼ cwt. of coke per week. It has a hot plate, measuring 20 in. by 14 in., for simple cooking, and the grate, when open, provides facilities for heating flat-irons or toasting; the fire is visible through mica panels when the door is shut. A useful feature is a patent extending rail which serves three purposes: it protects the hands from being burnt against the hot plate, prevents pots and pans being accidentally knocked off the plate, and, when pulled out in front of the fire, provides facilities for drying glass cloths, etc.

The Wembley Site.

The Wembley Urban District Council has agreed to the Exhibition site being used for factories with the exception of a 10 ft. strip of ground along the Raglan Gardens frontage, which will be presented to the Council, and the plot of land used for the charabanc park, which will be used as an open space. The New Zealand and Malaya buildings will be pulled down, and it is understood that the Palace of Arts will become a Government museum. The Australian, Canadian and South African buildings will be sold for the benefit of the guarantors.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*. † Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.

ABERDEEN.—Extension of the new boiler-house at the Ferryhill Electricity station, for the T.C.:—
*Caledon Shipbuilding and Engineering Co., Ltd., Dundee £6,650

ADDINGHAM.—Rebuilding of a portion of Town-Head Mills. Mr. J. Harpley, architect:—
**Mason*—T. Atkinson & Son, Eastburn.
**Joiner*—Cowling Bros., Silsden.
**Plumber*—M. G. Spencer, Silsden.
**Painter*—R. Robinson, Bradford.
**Steelwork*—F. Firth, Batley.
**Plasterer*—J. Greenwood & Sons, Crosshills.
**Slater*—J. Richardson & Sons, Rawdon.

BANGOR.—Alterations to the Police Station, for the Carnarvonshire C.C.:—
*J. D. Jones £217

BECKENHAM.—Fencing at allotments, for the U.D.C.:—
‡Stanley Underwood & Co. £270

BLACKPOOL.—Baptist chapel at Whitegate-drive, for the Rev. L. Banner. Mr. A. F. Keighley, L.R.I.B.A. architect, Birley-street:—
*Sir Lindsay Parkinson & Co., Ltd.

BOLTON.—Messroom accommodation at Wellington depot, for the T.C.:—
*Norman Fairbrother.

BOLTON-UPON-DEARNE.—For the works in connection with the construction of sanitary convenience, &c., at Wath-road, Fierlong-road, and the Cemetery Chapel, for the U.D.C. Mr. W. H. Adams, A.R.I.B.A., architect:—
*E. Brown, Wath-upon-Dearne £956

BOWDEN.—Thirty-six houses off Priory-road, for the U.D.C. Messrs. Halliday & Agate, architects, Manchester:—
*W. Peake, Warrington.

BRIGHOUSE.—Pavilion, for the Brighouse Cricket, Cycling and Bowling Club:—
*W. Hallewell, Brighouse £100

BUSHEY.—Sewage pumping station and certain works at the sewage purification works, for the U.D.C. Messrs. Martin & Roberts, engineers, 108, St. George's-square, S.W.:—

Jones Bros., Streatham	£9,294 0 0
Jas. Byrom, Ltd., London	8,984 9 7
Wilfred E. Ellis, Watford	7,720 16 0
C. Brightman & Son, Watford	7,683 0 0
*W. & C. French, Buckhurst Hill	7,256 9 0

CARRISTON.—New storage reservoir, near that existing, for the Wemyss & District Water Trust. Messrs. Crouch & Hogg, engineers:—
*J. Summerville, Dunfermline.

CHESTERFIELD.—Sixty-two houses on St. Augustine's estate, for the T.C.:—
*S. Higton & Sons £26,360

CHESTERFIELD.—Erection and fitting of laboratory and offices at sewage works, for the T.C.:—
*Moss & Sons £1,840

CONWAY.—Alterations to the Police Station, for the Carnarvonshire C.C.:—
*P. M'Loughlin, Warrington £3,961

DERBY.—For (*a*) 17 pairs; (*b*) three pairs houses on land between Brighton-road and London-road, and (*c*) six pairs on the Osmaston estate, for the T.C.:—

(*a*) ‡Pegg & Sons	£923 per pair
(*b*) ‡J. Warner	923 per pair
(*c*) ‡T. H. Beeson	923 per pair

DUBLIN.—Seventeen houses at Glenageary, and three at Howth. Messrs. Higginbotham & Stafford, architects, 3, Clare-street. Quantities by Mr. A. E. Smith, quantity surveyor, 5, St. Andrew-street:—

J. Pemberton & Sons and J. & F. Pemberton	£40,782 17 6
V. & R. Pemberton	40,401 0 0
W. Lacy & Sons	38,184 12 1
Geo. Bower	37,271 0 0
T. E. Moore	34,881 0 0
Jas. Beckett, Ltd.	34,600 0 0
W. & A. Roberts	34,300 0 0
G. W. Scott & Co., Ltd.	30,706 12 6

(All of Dublin).

ENFIELD.—Twelve houses in Malvern-road, four in Chesnut-road, and four in Green-street, for the U.D.C.:—
*Willmott & Son, Hornsey £9,880
Subject to M.H. approval.

FAILSWORTH.—For 40 houses at Lord-lane, for the U.D.C. Mr. G. H. Fletcher, L.R.I.B.A., architect, 1, Cathedral Gates, Manchester:—
†J. & J. Froggatt, Failsworth.

FLEETWOOD.—Fifty-two houses on the Warren Farm Estate, for the T.C. Mr. E. Frobisher, engineer and surveyor:—
*R. Lancaster & Sons, Blackpool.

FOLKESTONE.—For (*a*) six houses and (*b*) nine pairs of flats on the Canterbury-road housing site, for the T.C. Mr. A. E. Nichols, Borough Engineer:—

	(*a*)	(*b*)
*J. G. Parsons & Son, Folkestone	£3,144	£6,435

GLASGOW.—192 houses for the Duke-street re-housing scheme, for the T.C. :—

Mason—
‡J. Taylor £25,983 7 8
Joiner—
‡R. Anderson & Co. 16,431 9 1
Slater—
‡W. Graydon 3,299 12 10
Plumber—
‡J. Somerville 12,993 1 10
Plaster—
‡L. Kirk, Ltd. 4,856 14 10
Glazier Work—
‡W. Purdon & Son 517 17 8

GLASGOW.—Seven shops at Tollcross, for the T.C. :—

Mason—
‡Strang & Jack £956 13 6
Joiner—
‡Geo. Eaglesham 1,347 11 8
Slater—
‡Charles Wilson 180 5 4
Plumber—
‡H. Twaddle & Son 189 10 1
Glazier—
‡G. & J. Rae, Ltd. 243 12 6

GLASGOW.—288 houses, for the rehousing section of the scheme at Govanhill, for the T.C. :—

Mason, &c.—
‡W. T. Aitkenhead £39,747 8 2
Joiner—
‡R. Anderson & Co. 24,945 16 3
Slater—
‡W. Laurie 4,196 10 11½
Plumber—
‡J. M. Symington & Co. 18,862 4 11
Plasterer—
‡A. M'Kellar 7,548 13 8
Glazier—
‡G. G. Kirk, Ltd. 780 8 8

GLASGOW.—For (*a*) mason, &c., and (*b*) the tiling work in connection with the proposed new baths and wash-houses at Shettleston, for the T.C. :—

(*a*) ‡Brown, Fraser & Co. £32,333 0
(*b*) ‡Brown & Son 7,001 1

GLASGOW.—Steelwork for booster and governor house at the Dalmarnock Gasworks, for the T.C. :—

‡Lambhill Iron Works, Ltd. £856 14
(Lieu of Fleming Bros.' tender.)

GLASGOW.—For (1) painter work, and (2) electric lighting installation required in connection with the second section of the improvement, for the T.C. :—

(1) ‡A Anderson £572 1 10
(2) ‡J. Laird & Co. 1,592 1 2½

GLASGOW.—Rebuilding booster and governor house at Dalmarnock gas works, for the T.C. :—

‡Hunter & Clark £1,669 12

GODSTONE.—Sixteen parlour and four non-parlour houses, at Limpsfield, for the R.D.C. :—

*N. Smith & Son, Maidstone £10,704

GOMERSAL.—For house at Oxford-road. Messrs. Marriott, Son & Shaw, architects :—

Excavator's, Mason's and Bricklayer's work—
*James Horkin & Sons, Liversedge.
Carpenter's and Joiner's work—
*J. E. Greaves, Heckmondwike.
Plumber's and Glazier's work—
*H. S. Thornes, Leeds.
Plasterer's work—
*Fred Robinson, Gomersal.
Tiler's work—
*A. Thompson, Liversedge.
Painter's work—
*J. W. Bennett, Heckmondwike.

HARROGATE.—Lavatory accommodation on the Town Hall site, for the T.C. :—

Excavator, Mason and Bricklayer—
*G. A. Scaife, Harrogate £178 15 10
Carpenter and Joiner—
*W. Watson 130 10 0
Plumber and Glazier—
*G. Thompson 197 0 0
Wall Tiler, &c.—
*North Art Pavement Co. 178 4 9

HARTISMERE.—Twenty-one cottages, for the R.D.C. B. Catchpole, architect and surveyor, Mellis, Eye, Suffolk :—

*A. J. Gibbons, Crowfield—
Six cottages £2,475 0
*Horace Taylor, Debenham—
Nine cottages 3,358 10
*Pearson Bros., Diss—
Six cottages 2,383 0

HEMSWORTH.—Business premises in Pontefract-road, for Messrs. W. J. Lockwood & Co. Mr. H. Slater architect, Doncaster :—

*Wm. Hanley & Sons, Hemsworth.

HIGHAM FERRERS.—Branch stores in York-street and Lancaster-street, for the Higham Ferrers Co-operative and Industrial Society, Ltd. Mr. H. Adnitt, architect, 4, Beaconsfield-terrace, Rushden :—

*Pettit & Son, Northampton.

HITCHIN.—Pair of cottages on the Kimpton housing site, for the R.D.C. :—

‡Goldhawk & Sons .... £806 10s. per pair

HORWICH.—One hundred and fifty houses, for the U.D.C. Mr. T. Green, surveyor. Quantities by the surveyor :—

*Selwood Lloyd & Co., Birkenhead—66 ..... each £460 0
*Middleton & Co., Blackpool—
64 ..... „ 461 0
*Keenan & Gates, St. Anne's-on-Sea—56 ..... „ 464 10
20 ..... „ 419 0

HULL.—Tramway siding at Newington crossing, for the T.C. :—

*Sangwin, Ltd. £789

HULL.—Steel roof principals for depot workshop, Ringrose-street, for the T.C., in place of tender which was conditional :—

*Lambhill Ironworks, Ltd.

HYTHE.—Twenty additional houses in Cinque Ports-avenue, for the T.C. :—

*Bailey & Dixon, Hythe £7,118

KIRKCUDBRIGHT.—New water supply from Loch Whinyeon, about eight miles from the town, for the T.C. :—

*Clydeside Constructional Co., Ltd., Bridge of Weir—cutting of the tracks and the laying of the pipes.
*Stanton Ironworks Co., Ltd., Stanton, Notts—spun-iron pipes.

KNUTSFORD.—Nurses' home, for the Bucklow B.G. Mr. W. Kennedy, architect, Manchester :—

*J. Dolan, & Son, Warrington.

LEITH.—New grain warehouse and silos of reinforced concrete adjoining the East Quay, for the Leith Dock Commission. Mr. A. H. Roberts, engineer :—

John McGilvray & Co., Glasgow.
Sir Wm. Arrol & Co., Ltd., Glasgow.
A. M. Cochran & Co., Glasgow.
J. & W. Stewart, London.
Bain & Brown, Ltd., Leith.
Sir Robert McAlpine & Sons, Glasgow.
Colin MacAndrew, Ltd., Edinburgh.
Robert Bruce & Son, Edinburgh.
Stuart's Granolithic Co., Ltd., Edinburgh.
Saxlid & Partners, London.
James Scott & Son (Aberdeen), Ltd., Aberdeen.
John Angus & Sons, Edinburgh.
Topping & Co., Edinburgh.
Gray's Ferro-Concrete Co., Ltd., Glasgow.
*Melville, Dundas & Whitson, Glasgow £75,441

LIVERPOOL.—100 houses, for the T.C. :—

‡Universal Housing Co., Ltd., Rickmansworth—
Pair of non-parlour type houses £790
Block of four non-parlour type houses 1,550

LIVERPOOL.—Thirty houses, for the T.C. :—

‡C. J. Doyle, Liverpool ..... £510 each

LONDON.—For the Spitalfields Market extension sub-structure, for the Market Committee :—

James Carmichael (Contractors), Ltd. £128,400
Holland & Hannen and Cubitts, Ltd. 126,970
Cropley Bros., Ltd., Epsom 120,347
Holloway Bros. 115,285
Walter Lawrence & Son, Ltd. 110,738
John Mowlem & Co., Ltd. 110,326

LONDON.—Heating battery and air duct at wash-house, for the Southwark B.C. :—

W. G. Cannon & Sons, Ltd. £175
J. J. Lane, Ltd. 168
‡The Sturtevant Engineering Co., Ltd. .. 167

LONDON.—Cleaning stonework at Mansion House, for the City Corporation :—

Holloway Bros., Ltd. £3,622
W. Lawrence & Son, Ltd. 864
Trollope & Colls, Ltd. 825
Ashby & Horner, Ltd. 798
‡John Greenwood, Ltd. 447

LOUGHBOROUGH.—Walls on the William-street housing site, for the T.C. :—

H. Hammond & Son £207 0
W. Corah & Sons 198 0
T. Barker & Sons 190 0
A. Faulks 175 0
‡J. Hawes 142 10

MANCHESTER.—Erection of Newton Heath Clinic, for the T.C. :—

*Slater—*Kilburn & Sons, Ardwick.
*Steelwork—*Redpath, Brown & Co., Ltd., Trafford Park.
*Plumber and Glazier—*T. Lightfoot & Co., Manchester.
*Plasterer and Painter—*A. & S. Wallace, Newton Heath.

MANCHESTER.—Various tenders accepted by the T.C. :—

New Harpurhey High School—
*Patent Glazing—*W. H. Heywood & Co., Ltd., Manchester.
Claremont-road, Wilbraham-road, and Gorton Mount Schools—
*Memorial Stones—*Wm. Kirkpatrick, Ltd., Manchester.
Newton Heath Clinic—
*Carlyle & Co., Ltd., Manchester.
School Clinic, 1,460, Ashton Old-road—
*Painting—*Drewery & Sons, Ltd., Manchester.
City Training College—
*Painting—*Jones & Jackson, Ltd., Manchester.
Central High School for Girls—
*Lavatory Accommodation—*G. Macfarlane & Son, Ltd., Manchester.
Abbott-street School—
*Heating Installation—*Hatton & Co., Ltd., Manchester.
St. Mary's-road School—
*Heating Installation—*C. Seward & Co., Preston.

MANCHESTER.—Alteration and repairs at Platt Hall, for the T.C. :—

*F. Hey, of Manchester.

MANCHESTER.—Alterations at Choriton branch library, for the T.C. :—

*Tucker & Young, Ltd.

MANCHESTER.—Pavilion and conversion of lodge into two cottages, for the T.C. :—

*Fearnley & Son, Ltd., of Salford.

MANCHESTER.—New Sunday schools for St. John's Church, Old Trafford, for the Vicar and Churchwardens. Mr. R. Martin, Diocesan Surveyor, architect, 90, Deansgate :—

*L. Fairclough, Adlington.

NEWCASTLE.—Branch library at Scotswood, for the Corporation :—

S. Miller, Newcastle £11,339 1 7

NEWPORT (MON.).—Reconstruction of the Tredegar Arms Hotel, High-street, including the provision of shops and a bank on the corner site. Messrs. Griggs & Vaughan, FF.R.I.B.A., architects, Metropolitan Bank chambers :—

*J. Jenkins, Ltd., Stow Hill, Mon.

NORTHWICH.—Public lavatory, for the U.D.C. Mr. J. Brooks, Surveyor :—

*F. Whitehead.

OLDHAM.—Reconstruction and rebuilding premises, 39 and 41, High-street, for Messrs. Jolley & Co. Mr. W. Thorpe, architect, Union Bank-chambers :—

*F. Pollard & Co., London.

OLDHAM.—Sub-station at Broadway, Chadderton, for the T.C. :—

*James Hartley.

ONGAR.—For four parlour type cottages at Stamford Rivers, for the R.D.C. Mr. P. Pearce, building surveyor :—

E. Upton, West Ham £3,122 18
C. Smith, Lambourne 2,271 0
A. King, Harlow 2,000 15
F. Gann, Standon 2,025 0
A. Dicker & Crabb, Ongar 1,765 0
J. W. Spearman, Ongar 1,745 0
*H. G. Acres, Ongar 1,650 0
Surveyor's estimate 1,700 0

OSSETT.—Twenty-four houses on the Leeds-road site, for the T.C. :—

Building—
‡A. E. Clegg £5,172 16 0
Joinering—
‡J. H. Horsnell 2,498 18 0
Slating—
‡Shevill & Forster 677 0 0
Plumbing—
‡J. Shepley 1,399 1 6
Plastering—
‡A. & F. Hodgson 717 18 3
Painting—
‡H. Fisher 127 17 6

OSSETT.—Wall tiling at Gawthorpe school, for the E.C. :—

*Bangham & Fleming, of Leeds £329

OSSETT.—Heating installation at Gawthorpe school, for the E.C. :—

*Curtis & Duckhouse, Wakefield £688

OSSETT.—Terrazzo flooring for the E.C. :—

*A. Quilligotti, Manchester £215

OSSETT.—Wood block flooring, for the E.C. :—

*T. K. Yeates & Co., Leeds £248 3

OTLEY.—Bandstand in Wharf meadows, for the U.D.C. :—

*Walter Richmond.

OXFORD.—Alterations and additions to the "Isis" Hotel in Iffley-road. Mr. J. C. Loed, architect, 12, Cornmarket :—

*Hinkins & Frewin.

PLYMOUTH.—Tea pavilion on the Hoe, for the C.B. Mr. J. Wibberley, Borough Surveyor :—

*A. Landry, Plymouth.

POOLE.—Erection of the dolphins at the bridge, for the T.C. :—

‡Cleveland Bridge and Engineering Co., Ltd. £3,707

PORTSMOUTH.—Business premises, Fratton-road for Mrs. Smith. Mr. Harvey, architect :—

T. Stride £970
John Lay & Co. 848
F. Timpson 768
F. Privett 763
Norman & Son 724
L. Hoad 720
*Tanner Bros. 658

PORTSMOUTH.—Club premises for tramway employees, North End. Mr. A. E. Tutte, architect, Commercial-road :—

A. E. Porter £10,200
Jno. Croad 10,140
F. Corke 9,999
E. A. Sprigings 9,994
F. Privett 9,889
Tanner Bros. 9,750
John Lay & Co. 9,648
*S. Salter 9,581

PORTSMOUTH.—Block of flats at Tokar-street, Eastney. Mr. S. E. White, architect and surveyor, 73, Waverley-road, Southsea :—

*John Lay & Co.

ROCHESTER.—Demolition of Nos. 29 to 33, High street, and clearing the site for new central premises, for the Rochester and District Co-operative Society, Ltd. Mr. L. G. Ekins, F.R.I.B.A., architect :—

*W. E. Simmons & Co., Chatham.

SCARBOROUGH.—Children's home, in Stepney-road, for the B.C. Mr. G. H. Fawcett, architect, 3, York-place :—

*T. Wilcox £3,286 18 6

SHEFFIELD.—Houses on the Manor estate for the T.C. :—

*R. J. Hinchcliffe (36) £14,621
*W. Marlow & Sons, Ltd. (65)..... 27,130
*H. Teanby (32) 12,276
*J. Laver & Sons, Ltd. (16)..... 6,496

SHEFFIELD.—Heating apparatus and boilers at Tinsley tram depot, for the T.C. :—

*Brightside Foundry & Engineering Co., Ltd., Sheffield £3,715

PARQUET & WOOD-BLOCK FLOORING supplied and fixed in any locality.
Post, or Phone (Park 1885), Particulars of requirements to
TURPIN'S PARQUET FLOORING CO.,
25, NOTTING HILL GATE, LONDON, W.11.
ESTD. 1866

UNIT SYSTEM DIRECTORIES FOR OFFICE BUILDINGS
ELIMINATE ALL DIFFICULTIES IN PLANNING FOR TENANTS' NAMES
CHANGEABLE SIGN CO LTD
30 VICTORIA STREET WESTMINSTER S.W.1

J. GLIKSTEN & SON
LIMITED
Specialities in
SEASONED HARDWOODS
MAHOGANY WALNUT
JAPANESE, AMERICAN and WAINSCOT OAK, TEAK, WHITEWOOD, &c.
REGISTERED OFFICE AND WHARF
CARPENTERS RD.
STRATFORD
LONDON E.15
Telephone: EAST 3771 (5 lines)
Telegrams: GLIKSTEN 'PHONE LONDON

SOUTH QUEENSFERRY.—Extension of the Hawes Pier at South Queensferry, for the L. & N.E. Rly. Co. :—

*Sir W. Arrol & Co., Ltd., Glasgow.. £20,000

SOUTH SHIELDS.—Convenience on the Cleadon Park site, for the T.C. :—

‡Henderson Bros., South Shields £501 5 7

STAMFORD.—Extension of the Stamford and Rutland General Infirmary, for the Governing Committee. Messrs. Trayler & Lenton, FF.R.I.B.A., architects, 16, Broad-street :—

Building work—
*Bowman & Son, Stamford.
Steel windows—
*Mellowes & Co., Ltd., Sheffield.
Floors and staircases—
*Kleine Patent Fire-resisting Syndicate, Ltd., London.
Escape ladders—
*Hayward & Sons, Ltd., Wolverhampton.
Joinery—
*Rippers, Ltd., Castle Hedingham.

STONE.—Fifty-eight houses on the site off Oulton-road, for the U.D.C. Mr. A. P. Miller, architect :—

*H. Poole, Stone ..... each £537

STRATFORD-ON-AVON. Houses, for the R.D.C. :—

Ashorne (two houses)—
*J. T. Thorpe, Wellesbourne..... £500 0 per house
Beaudesert (four houses)—
*H. P. Tarleton, Redditch 485 0 per house
Ettington (four houses)—
*P. C. Harris ..... 469 0 per house
Henley-in-Arden (six houses)—
*G. Coppage ..... 475 0 per house
Kineton (four houses)—
*R. Brisker ..... 475 0 per house
Snitterfield (four houses)—
*H. P. Tarleton, Redditch 500 15 per house

TAVISTOCK.—Four houses at Callington-road, for the U.D.C. :—

*C. Doidge £2,216
Subject to the sanction of the M.H.

TIVERTON.—Sixteen houses, for the R.D.C. :—

*Andrews & Miller, Clevedon..... £6,868

WALSALL.—Three non-parlour type houses on the small piece of land fronting to Queen Mary-street on the Palfrey housing site, for the T.C. :—

‡Richards, Smith & Co..... £1,165 16

WARRENPOINT.—Alterations and improvements to the Town Hall, for the U.D.C. :—

*J. Wilson & Son..... £345 9

WATFORD.—Concrete foundation at new power station, for the T.C. :—

‡Industrial Construction Co..... £2,470

WORTHING.—Providing and fixing trellis work to the interior walls of the shore-end pier pavilion, for the T.C. :—

*Messrs. Thornborough £731

J. J. ETRIDGE, JR. Ltd
SLATING AND TILING
SLATE MERCHANTS
CONTRACTORS.
Inspections and Reports made on
OLD OR FAULTY ROOFS
in any part of the country.
Telephone: Bishopsgate 1944/5, or write,
Bethnal Green Slate Works,
BETHNAL GREEN, LONDON, E.

HIGH-CLASS
FLOORINGS
of every description in
WOOD BLOCKS. PARQUETRY
SEASONED T. & G. WAINSCOT OAK
TEAK AND MAPLE
FACTORY AND ROADWAY PAVING
STEVENS & ADAMS
LIMITED
VICTORIA MILL, POINT PLEASANT
WANDSWORTH, S.W.18.
(Phones: Putney 1700 & 2457

FITZPATRICK & SON
MASONS & PAVIORS
Secondhand and Redressed (equal to new) Granite Setts and Kerb.
York Paving, Crazy Paving, Rockery Stone, Granite Spur Stones made to order.
Granite Chippings and Tarmacadam.
Granolithic and Sett Paving.
WRITE, PHONE or CALL :—
455, OLD FORD RD., BOW LONDON, E.3.
Phone: EAST 4808.

School & Hospital Stoves
MAKERS OF
WRIGHT'S IMPROVED and also SHORLAND PATENT WARM AIR VENTILATING PATTERNS.
GEO. WRIGHT (LONDON) LIMITED
19, Newman St., Oxford St., London, W.1
Burton Weir Works, Rotherham.

Telephone CLERKENWELL 1388.
OGILVIE & CO., Many years connected with the late Firm of W. H. LASCELLES & Co. of Bunhill Row.
Hildmay Works, Hildmay Avenue, Islington, N.
EXPERTS IN HIGH-CLASS JOINERY.
ALTERATIONS AND DECORATIONS.

Telegrams; 'Frolic, Liverpool' 'Phone 238 Bank
E. B. BURGESS & CO.
6, CASTLE ST., LIVERPOOL.
WOOD BLOCK FLOORING AND PARQUETRY.

Wheatly & Co.,
SPRINGFIELD TILERIES, NEWCASTLE, STAFFS.
Phone: Newcastle, Staffs, 101. Estd. Over 50 Years.
Grams: "Wheatly, Trent Vale." Brand: TRITON.
SPECIALITIES.
Rustic, Sand Faced and Hand Pressed Tiles in Blue, Blue Brindled, Red, Light Brindled and Dark Brindled Colours. Extensive stocks held of many varieties of Flooring Quarries, Ridge Tiles, Garden Edging Tiles, Air Bricks, Blue Bricks, Copings, etc., etc.
Price List and Catalogue, or Illustrated Brochure of Roofing Tiles free on demand.
N.B.—ALL our products are Hand-made by the Plastic Process.

HOWELL J. WILLIAMS
Builders Ltd.
High-Class Building and Joinery Work
11/17, BERMONDSEY STREET,
Telephone: HOP 202 LONDON BRIDGE, S.E.1
Builders of very many well-known Banks, Office and Business premises. Our works especially convenient for City Building and fittings.